

*Post Graduate Certificate Course in  
Auditory Verbal Therapy*

**(PG Cert. in AVT)**

**(Regulations, Norms and Course Content)**

**2011**

# **GENERAL REGULATIONS OF THE COURSE**

## **1. Preamble**

The Government of India has visionary legislation in place, recognizing the right of education for people with disabilities. The ratification of the UN Convention on the Rights of Persons with Disabilities (Article 24) in 2007 and 'The Right to Education Act (2009)' pave the way to bring new direction into the field of the deaf and hard of hearing. Modern technology is now available in India and professionals offering services to the deaf and hard of hearing must develop the skills to use the modern technology available to draw optimal benefit from these new opportunities. Training of professionals paves the way for India's professionals to upgrade. Rehabilitation Council of India (RCI) has been India's apex body to facilitate change in services to persons with disabilities. The RCI has already begun analyzing how to best implement the forward thinking concept of a barrier free environment for persons with disabilities as enunciated in the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) 2006.

The significant change in thinking that the UNCRPD (2006) has brought about is that issues regarding persons with disabilities will now be viewed as a human rights issue and not merely a medical or health care issue. However, majority of the training programmes tend to focus more on the disability than on the needs of these children. This shift in vision would best be bridged by instituting a Post Graduate Certificate Course in Auditory Verbal Therapy for training the re/habilitation professionals in Education and Speech & Hearing. By its very definition, Auditory Verbal Therapy, highlights the similarities between hearing children and their deaf and hard of hearing peers and therefore uses normal patterns of development on which to base the habilitation of deaf and hard of hearing children. Inclusion lies at the very heart of Auditory Verbal Therapy. It is befitting that a leader such as the RCI continues its initiative to facilitate continued change by instituting this training course in Auditory Verbal Therapy. This training course in Auditory Verbal Therapy and RCI, share a common principle. The centre of both is a strong commitment to the development of

human resources. The RCI has rightly identified the need to upgrade their training courses to reflect all manner of equalities for persons with disabilities as outlined in the UNCRPD document.

RCI plays a key role in linking tradition to modernity and its training courses for professionals are the bridges that make this possible. A course in training professionals in Auditory Verbal therapy once instituted by the RCI will allow the professionals serving the deaf and hard of hearing in India, to build on their knowledge and skills from their masters, graduation and diploma level training courses and to upgrade their knowledge and skills to avail optimally of the most modern hearing technology (digital hearing aids, FM systems and cochlear implants) now available in India.

Just as the bachelor level training courses contain an add-on module of training as compared to the diploma level courses and the master level training courses contain an even higher add-on module of training as compared to the bachelor level, so also the Post Graduate Certificate Course in Auditory Verbal Therapy offers a significant add-on module that will upgrade the skills and knowledge of re/habilitation professionals serving the deaf and hard of hearing.

Systematic and intensive training of the existing re/habilitation professionals is critical if India is to keep pace with international trends in the habilitation of deaf and hard of hearing children. International protocol recommends that training in Auditory Verbal therapy be given only by professionals who are themselves certified as LSLS Cert. AVT® by the A.G. Bell Academy, an international organization. Therefore, this Post Graduate Certificate Course in Auditory Verbal Therapy must follow the same module that theory, guided observation and practice of Auditory Verbal Therapy be taught by a LSLS Cert. AVT®. Experts in their fields of expertise will form the faculty and teach the other related segments of the curriculum, so that the trainees receive the benefits of being taught by a team of professionals. This will prepare them well to work as a team

in practice, on the successful completion of this Post Graduate Certificate Course in Auditory Verbal Therapy.

Across the world today, all countries are working towards implementing the position statement of the Joint Committee on Infant Hearing (JCIH), 2007. This 1-3-6 protocol specifies that with the help of universal newborn infant screening babies be identified as having a hearing loss by one month of age, be appropriately amplified by three months of age so that effective intervention begins at six months of age at the latest. By instituting this Post Graduate Certificate Course in Auditory Verbal Therapy, India will demonstrate through her apex regulatory body of RCI that she recognizes the need for focused training of re/habilitation professionals who serve babies who are deaf and hard of hearing in listening, learning and spoken language skills in order to comply with the 1-3-6 protocol and so become a member of the global community.

## **2. Aims and Objectives of the Course**

The Post Graduate Certificate Course in Auditory Verbal Therapy aims to equip and promote RCI registered re/habilitation professionals in Education and Speech & Hearing to get trained and practice auditory verbal therapy for young children with deafness and hard of hearing as a part of the early intervention programme. The course further aims to facilitate them in setting up of early intervention centers staffed by competent therapists who have the skills necessary to work with deaf and hard of hearing children.

The Post Graduate Certificate Course in Auditory Verbal Therapy prepares the students to fulfill the following objectives:

1. To acquire knowledge about the developments in modern technology and its implications in the practice of educating children who are deaf/hard of hearing.
2. To acquire knowledge and identify the principles and practices in Auditory Verbal Therapy and its allied areas.
3. To develop skills and competencies for practicing Auditory Verbal Therapy as a part of the early intervention services to cater to the needs of young children with deafness/hard of hearing.
4. To promote the practice of Auditory Verbal Therapy systematically in India.

### 3. General Framework of the Course:

The PG Certificate in AVT course consists of 4 theory papers and 4 practicum areas which are mentioned below:

(i) **Theory Papers**

Paper No	Title
Paper I	Auditory Verbal Therapy
Paper II	Spoken Language Communication Development
Paper III	Hearing and Hearing Technology
Paper IV	Auditory Functioning and Assessment

(ii) **Practicum Areas**

Area No	Title
I	Observation of Auditory Verbal Therapy sessions
II	Practice Teaching
III	Assessment and Report Writing
IV	Observation of Audiological Management

### 4. Duration of the Course

The duration of the course is six months

### 5. Distribution of Time for Theory and Practical Work

The course is spread over a period of 120 days (excluding Saturdays and Sundays) with a minimum of 720 hours including preparatory time for final examination. The distribution of hours for theory and practicum areas is as follows:

(i) **Theory Papers**

<b>Paper No</b>	<b>Title</b>	<b>Hours</b>
Paper I	Auditory Verbal Therapy	120
Paper II	Spoken Language Communication Development	120
Paper III	Hearing Technology and Hearing	120
Paper IV	Auditory Functioning and Assessment	120
	<b>TOTAL HOURS</b>	<b>480</b>

(ii) **Practical Areas**

<b>Area No</b>	<b>Title</b>	<b>Hours</b>
I	Observation of AVT sessions:	
	(i) Supervised	30
	(ii) Unsupervised	30
II	Practice Teaching	
	(i) Planning	30
	(ii) Execution (Supervised)	12
III	Assessment and report writing:	
	(i) Planning	10
	(ii) Execution (Supervised):	8
IV	Observation of Audiological Management	
	(i) Supervised	20
	(ii) Unsupervised	10
	<b>Total Hours</b>	<b>150</b>

## 6. Eligibility for Admission

Any candidate with a graduate degree in Audiology /Speech-Language Pathology/ Special Education (H.I) or a graduate with DSE (H.I) / DHLS / DTY (H.I) who is

registered with Rehabilitation Council of India. Foreign Nationals should produce evidence of professional registration of their home country.

## 7. Standard of Passing

The minimum percentage of mark required for passing each theory paper is 50%(internal+ external) and 50 % (internal+ external) in practicals and 50% (Theory + practical) in aggregate. With respect to the aggregate mark gained by the candidate, one of the following corresponding classes will be accorded to the candidate.

Class	Marks
First class with distinction	525 & above
First class	420 - 524
Second class	385 - 419
Pass class	350 - 384
Fail	349 & below

## 8. Nature and Scheme of Examination

The scheme of examination is formative in nature which includes both internal and external evaluations. The internal evaluation will be carried out by the concerned faculty teaching that particular theory paper / practicum area. The external theory and practical examinations will be conducted only by the qualified faculty involved in conducting Post-Graduate Certificate Course in Auditory Verbal Therapy and appointed by the competent authority. Preparatory leave of 2 weeks will be granted to the trainees prior to the external theory examination.

The scheme of examination is as follows:

(i) **Theory Papers**

<b>Paper No</b>	<b>Title</b>	<b>External Marks</b>	<b>Internal Marks</b>
Paper I	Auditory Verbal Therapy	80	20
Paper II	Spoken Language Communication Development	80	20
Paper III	Hearing and Hearing Technology	80	20
Paper IV	Auditory Functioning and Assessment	80	20
	<b>TOTAL MARKS</b>	<b>400</b>	

**(ii) Scheme of Evaluation for Practicum Areas**

<b>Title</b>	<b>Internal Marks</b>	<b>External Marks</b>
Observation and writing reports ( 20 live sessions )	25	-
Observation and writing reports ( 20 recorded sessions )	25	-
Planning and execution of lessons ( 20 live sessions )	100	
Viva based on practicum areas I,II,III & IV	-	50
Unedited video session	-	100
<b>TOTAL MARKS</b>	<b>300</b>	

## **9. Medium of Instruction**

The medium of instruction is English.

## 10. Reappearing Facility

- (i) A candidate who fails in one or two papers shall be allowed to appear in that particular paper only for a maximum of three times within three subsequent years.
- (ii) If a candidate fails in three or more than three papers, he / she shall have to reappear in all the theory papers.
- (iii) If a candidate fails in one or two practicum areas, he / she shall have to reappear in that particular practicum area only.
- (iv) If a candidate fails in more than two practicum areas, he / she shall have to reappear in all the practical areas.
- (v) A candidate who has kept the term for the PG Cert. in AVT who has either not appeared for theory examination or failed in theory examination will be permitted to carry forward the marks obtained in practical examination
- (vi) A candidate who has kept the term for the PG Cert. in AVT who has either not appeared for practical examination or failed in practical examination will be permitted to carry forward the marks obtained in theory examination

## 11. Teacher – student ratio

The teacher student ratio is 1: 5

## 12. Intake capacity

Considering infrastructural facilities needed and the dearth of certified AV therapists, a maximum of 10 candidates may be admitted for the course.

## 13. Infrastructure facilities

The minimum infrastructure required for offering PG cert. in AVT is given below .The institution conducting the training course should have a Model Centre/s practicing auditory verbal therapy or should obtain Memorandum of Understanding with the other Auditory Verbal therapy centre/s near to the institution for conducting the practical. The teacher student ratio of the model centre should be 1:4 and the center should have a minimum strength of 10 young children who are deaf or hard of hearing, attending the therapy sessions.

<b>Minimum Infrastructure Required</b>	<b>No:</b>
Classroom with audio visual facility	1
Therapy room with recording facility( Audio-visual)	2
Library room with internet	1
Sound treated room for audiological evaluation	1
Faculty room	1
Consultation room	1
Office Room	1

## 14. Staff Pattern

The pattern of minimum essential staff required for conducting the course is given below. The minimum qualification and experience required should be as per the RCI norms.

<b>Staff required (Essential)</b>	<b>Number</b>
LSLS certified AVT therapist	1
Audiologist / Speech Language pathologist	1 (MASLP +3 yrs experience in cochlear implants and hearing aid fitting)
Neuro- developmental Pediatrician	1( part time)
Psychologist /Counselor	1( part time)
ENT Surgeon/Radiologist	1( part time)
Physio /occupational Therapist	1( part time)
Junior Administrative Officer	1( part time)
Librarian	1( part time)

# Course Content

## PAPER 1

### AUDITORY VERBAL THERAPY

#### Objectives:

1. Describe the rationale, principles, and strategies, techniques and procedures in Auditory Verbal Therapy.
2. Explain and demonstrate how to provide support to parents in an Auditory Verbal setting
3. List the factors that determine readiness for inclusive education.
4. Demonstrate skills in applying Auditory Verbal strategies, techniques and procedures in practice.
5. Demonstrate skills in writing an Auditory Verbal treatment plan.
6. Demonstrate skills in reading books to babies and young children who are deaf/ hard of hearing so as to maximize development of their auditory memory and receptive and expressive language skills.
7. Demonstrate skills in administering informal and formal assessments

#### Course Content:

#### **Unit 1: Principles, Strategies, Techniques and Procedures in Auditory Verbal Therapy 20 hours**

- 1.1 Principles of Auditory Verbal Therapy
- 1.2 Pre-requisites of Auditory Verbal Therapy
- 1.3 Strategies and Techniques of Auditory Verbal Therapy.
- 1.4 Procedures in Auditory Verbal Therapy
- 1.5 The Hand Cues and Learning-to-Listen Sounds

#### **Unit 2: The Auditory Verbal Treatment Plan 20 hours**

- 2.1 Planning long term goals
- 2.2 Planning short term goals
- 2.3 Lesson Planning
- 2.4 Recording diagnostic information
- 2.5 Obtaining a language sample

#### **Unit 3: Parent Guidance Education and Support 20 hours**

- 3.1 Role of Parents in Auditory Verbal Therapy

- 3.2 Coaching Parents
- 3.3 The Grieving Process, Stages of Grief and Coping Strategies
- 3.4 Managing Behavior
- 3.5 The Daily Routine

**Unit 4: Auditory Verbal Therapy for School Readiness and Inclusive Education 20 hours**

- 4.1 Factors influencing a recommendation for mainstreaming
- 4.2 Parent Readiness
- 4.3 Child Readiness
- 4.4 Parent Advocacy
- 4.5 Informal and Formal Assessments

**Unit 5: Emerging Literacy 20 hours**

- 5.1 The importance of reading
- 5.2 The role of the Auditory Verbal Therapist in the development of reading
- 5.3 Reading to babies and young children (birth to age 5 years)
- 5.4 Executive Function and reading
- 5.5 Guiding and coaching parents in reading to their children

**Tutorials 20 hours**

**(a) Discussion on :**

- Strategies, Techniques and Procedures in Auditory Verbal Therapy
- Planning short term and long term goals
- Role of Parents in Auditory Verbal Therapy
- Managing Behavior
- The Daily Routine
- The role of the Auditory Verbal Therapist in the development of reading
- Coaching and guiding parents in reading to their children
- Executive Function and reading

**(b) Reference work :**

## Reference:

1. Boehm, A. (1986). Boehm Test of Basic Concepts–3; The Psychological Corporation, San Antonio, TX
2. Bracken, B. (1984). Bracken Basic Concept Scale-revised. The Psychological Corporation, San Antonio, TX
3. Caleffe-Schenck, N. A Model of Auditory Verbal Stages of Development for Hearing Impaired Children (Handout)
4. D. Luterman (2002). When your Child is Deaf. A Guide for Parents, New York Press
5. Di-EL First Words Cochlear
6. Estabrooks W. (2006) Auditory Verbal Therapy and Practice, AG Bell Association for the Deaf and Hard of Hearing, Inc.
7. E. Cole, C. Flexer (2007) Children with Hearing Loss Developing Listening and Talking Birth to Six, Plural Publishing
8. Estabrooks W. (1998) Cochlear Implants for Kids, AG Bell Association for the Deaf and Hard of Hearing, Inc.
9. Estabrooks W. & Marlowe J, ( ) The Baby is Listening, A G Bell Association for the Deaf and Hard of Hearing, Inc, Washington DC
10. Pollack D.(1970) Educational Audiology for the Limited Hearing Infant, Charles C. Thomas
11. Rossetti, L. (1990). The Rossetti Infant-Toddler Language Scale: A Measure of Communication and Interaction. LinguiSystems, Inc., East Moline, IL.
12. Simser, J. (1993) Auditory-Verbal Intervention: Infants and Toddlers, Volta Review 95(3), 217-229
13. Simser J. (1999). Acoustic Highlighting Chart. In Parents: The Essential Partner in the Habilitation of Children with Hearing Impairment. Australian Journal of the Education of the Deaf (5), 55-62

## PAPER 2

### SPOKEN LANGUAGE COMMUNICATION DEVELOPMENT

#### Objectives

1. Describe the history and development of Auditory Verbal Therapy
2. Explain the anatomy of the speech mechanism and the role of each in the development of age appropriate speech
3. Describe the development of normal phonology and speech sounds in hearing babies and young children (birth to age 5 years)
4. Describe normal development in audition, language (receptive and expressive), cognition and communication or pragmatics in hearing babies and young children (birth to age 5 years)
5. List and explain the types and stages of play and how to assess play in children
6. Describe the impact of additional difficulties (sensory integration/attention difficulties) on the rate of progress in children with deafness/ hard of hearing.
7. Identify the need to document practice in order to create robust evidence
8. Describe the content and need for a Code of Ethics

#### Course Content:

##### Unit 1: History, Philosophy and Professional Issues

**20 hours**

- 1.1 History of Auditory Verbal Practice
- 1.2 Contributions of the pioneers
- 1.3 Evidence Based Practice; what it is and its role in tracking outcomes
- 1.4 Research findings of Evidence Based Practice
- 1.5 Code of Ethics

##### Unit 2: Spoken Language Communication (Speech)

**20 hours**

- 2.1 Anatomy and physiology of the speech mechanism
- 2.2 Speech acoustics and its application
- 2.3 Emergence of speech sounds and phonological development (birth to age 5 years)
- 2.4 Typical errors in the emerging speech of hearing children
- 2.5 Formal Speech Assessments

### **Unit 3: Child Development**

**20 hours**

- 3.1 Developmental Milestones (birth to age 5 years) in audition, language (receptive and expressive), cognition and communication or pragmatics in hearing babies and young children
- 3.2 Assessing rate of progress
- 3.3 Setting targets based on the child's rate of progress
- 3.4 Management of children with delayed milestones
- 3.5 Case studies

### **Unit 4: Children with Additional Difficulties: Sensory-integration/Attention difficulties**

**20 hours**

- 4.1 Sensory integration: what it is and its implications
- 4.2 Attention difficulties: what it is and its implications
- 4.3 Red Flags: what they are, identification, implications and management
- 4.4 The Team approach
- 4.5 Case studies

### **Unit 5: Play**

**20 hours**

- 5.1 Role of Play in child development
- 5.2 Types of Play in hearing children (birth to age 5 years)
- 5.3 Learning through Play
- 5.4 Assessing Play in children
- 5.5 Role of the Auditory Verbal Therapist in developing Play in children who are deaf or hard of hearing.

### **Tutorials :**

**20 Hours**

#### **a. Discussion on the following topics**

- Assessing rate of progress
- Management of children with delayed milestones
- Red Flags: what they are, identification, implications and management
- Assessing Play in children
- Role of the Auditory Verbal Therapist in developing Play in children with deafness/ hard of hearing.

## **b. Reference work**

### **Reference**

1. E. Cole, C. Flexer (2007) Children with Hearing Loss Developing Listening and Talking Birth to Six, Plural Publishing
2. Integrated Scales of Development
3. Ling, D. (1989) Foundations of Spoken Language for Hearing Impaired Children. A G Bell Association for the Deaf and Hard of Hearing, Inc, Washington DC
4. Manolson, A. (1992). It Takes Two to Talk. A Hanen Early Language Parent Guide Book (3<sup>rd</sup> ed.) Hanen Early Language Resource Centre, Toronto
5. Pollack, D. Goldberg D, & Caleffe-Schenck, N. (1997) Educational Audiology for the Limited Hearing Infant & Preschooler; An Auditory-Verbal Programme (3<sup>rd</sup> ed.) Charles C Thomas Publisher, Ltd., Springfield, Il.
6. S. Schwartz (2004) The New Language of Toys. Teaching Communication Skills to Children with Special Needs, Woodbine House
7. Seikle, J. A., King, D. W. & Drumright, D. G. (2000) Anatomy and Physiology for Speech, Language and Hearing (2<sup>nd</sup> ed.). Singular Publishing Group, Inc., San Diego
8. Wadsworth, B. J. (1979) Piaget's Theory of Cognitive Development (2<sup>nd</sup> ed.) Longman, New York

## **PAPER 3**

### **HEARING AND HEARING TECHNOLOGY**

#### **Objectives**

1. Describe the embryological development, anatomy and physiology of the ear and hearing
2. Explain the importance and benefits of early identification and intervention
3. Identify the causes, types and degrees of hearing loss and the need for on-going management of a child with deafness/ hard of hearing.
4. Describe pediatric audiological assessments and implications of test results for progress in an auditory verbal setting
5. Enumerate the benefits and limitations of amplification systems (hearing aids and cochlear implants)
6. Explain the need for establishing compliance of device usage, care, maintenance and minor trouble shooting of amplification systems
7. Explain pediatric assessments for cochlear implantation.
8. Demonstrate the knowledge of speech acoustics to interpret the audiogram.
9. Explain and provide guidance about suitable environmental conditions for listening at home and at school.

#### **Unit 1: . Hearing and Hearing Impairment**

**20 hours**

- 1.1 Basic anatomy and physiology of the ear and hearing, neuroanatomy
- 1.2 Embryological development of the auditory system
- 1.3 Physics of sound
- 1.4 Hearing Impairment in children (causes, types & degrees) & associated syndromes/malformations/conditions
- 1.5 Importance of the case history, red flags and implications

#### **Unit 2: Early Identification and High Risk Factors**

**20 hours**

- 2.1 Joint Committee on Infant Hearing position statement
- 2.2 Auditory Verbal International Audiological Protocol
- 2.3 Techniques for Neonatal Hearing Screening
- 2.4 High Risk Register

2.5 Team management of a child who is deaf or hard of hearing: Role of different professionals

**Unit 3: Paediatric Audiological Assessment: For Diagnosis**

**20 hours**

- 3.1 Test battery approach
- 3.3 Electrophysiological audiological tests
- 3.3 Behavioural audiological tests
- 3.4 Speech audiometry and Speech perception
- 3.5 Linking audiological findings to management strategies.

**Unit 4: Hearing Technology**

**20 hours**

- 4.1 Hearing aids: parts, functions and types
- 4.2 Assistive Listening devices
- 4.3 Cochlear implant technology, candidacy, counseling, surgery, device usage, functioning, care and maintenance, device activation and professional considerations, mapping and re-mapping.
- 4.4 Benefits and limitations of various amplification systems
- 4.5 Selection and fitting of various amplification systems

**Unit 5: Use and care and maintenance of amplification systems**

**20 hours**

- 5.1 Establishing compliance & use of hearing technology
- 5.2 Care and maintenance of amplification systems
- 5.3 Trouble shooting of hearing aids, ear molds, cochlear implants and assistive listening devices
- 5.4 Validation & monitoring of benefit from amplification systems
- 5.5 Setting realistic expectations

**Tutorials:****20 hours****a. Discussion on the following topics:**

- Early identification of hearing loss
- Pediatric audiological assessment
- Interpretation of audiograms and linking with management strategies
- Troubleshooting of hearing aids and Cochlear Implant

**b. Reference work****Reference**

1. Alpiner, J.G. and McCarthy, P.A. (1987) Rehabilitative Audiology: Children and Adults. Williams and Wilkins, Baltimore, Managing Director
2. American Speech Language Hearing Association: Joint Committee on Infant Hearing: Position Statement (2007)
3. American Speech Language Hearing Association: High Risk Register (HRR)
4. A-V International (2003): Suggested protocol for audiological assessment, hearing aid evaluation, and cochlear implant monitoring.
5. CHIP Profile
6. Clark, G.M., Cowan, R.S.C. and Dowell, R.C. (1997) Cochlear Implantation for infants and children: Advances. Singular Publishing Group, San Diego.
7. Deutsch, L.J. and Richards, A.M. (1979) Elementary Hearing Science. Pro-ed, Inc. Texas
8. Eisenberg, L.S. (Ed.)(2003) Assessment of hearing in infants and toddlers. The Volta Review. Vol 103, Number 4. A G Bell Association for the Deaf and Hard of Hearing, Washington D.C.
9. Estabrooks, W. (1994) Auditory Verbal Therapy for Parents and Professionals, A.G. Bell Association for the deaf and hard of hearing. Washington D.C.
10. Estabrooks, W. (1998) Cochlear Implants for Kids, A.G. Bell Association for the deaf and hard of hearing, Washington D.C.
11. Flexer, C. (1994) Facilitating Hearing and Listening in Young Children. Singular Publishing Group, Inc. San Diego
12. Harrison, M. (Ed.) (2006), Early Hearing Detection and Intervention: Trends, Progress and Challenges, The Volta Review, Vol. 106, Number 3. A.G. Bell Association for the deaf and hard of hearing.
13. Katz, J., 5<sup>th</sup> Ed. Handbook of Clinical Audiology. Williams and Wilkins, Baltimore, Managing Director
14. Ling, D. (1976) Speech and the hearing impaired child: Theory and Practice. A.G. Bell Association for the Deaf and Hard of Hearing Washington D.C.
15. Ling, D. and Ling, A.H. (1985) Aural Habilitation: The Foundations of Verbal Learning in hearing impaired children. A.G. Bell Association for the Deaf and Hard of Hearing Washington D.C.

16. Ling, D. (1989) Foundations of Spoken Language for hearing impaired children. A.G. Bell Association for the Deaf and Hard of Hearing Washington D.C.
17. Madell, J.R. (1998). Behavioural Evaluation of Hearing in Infants and Young Children Thieme Medical Publishers, Inc. New York, N.Y.
18. Madell, J.R. and Flexer, C. (2008), Paediatric Audiology. Thieme Medical Publishers, Inc. New York, N.Y.
19. Martin, F.N. (1986) (Ed.), Introduction to Audiology (3<sup>rd</sup> Ed.) Englewood Cliffs, N.J: Prentice-Hall Inc.
20. Northern, J.L. and Downs, M.P. Hearing in children (4<sup>th</sup> Ed.) Williams and Wilkins, Baltimore, MD American Speech Language Hearing Association: Joint Committee on Infant Hearing: Position Statement (2007)
21. Pollack, M.C. (1988) Amplification for the hearing impaired. Greene and Stratton, Inc. Orlando, FL.
22. Pollack, D., Goldberg. D., and Caleffe-Schenck, N. (1997) Educational Audiology for the limited hearing infant and preschooler: AN AV Program (3<sup>rd</sup> Ed) Charles C. Thomas Publisher Ltd., Springfield, IL.
23. Rice, G.B. and Lenihan, S. (Spring 2005) Early Intervention in Auditory/Oral Deaf Education: Parent and Professional Perspectives. The Volta Review. Vol. 105, Number 1. A.G. Bell Association for the Deaf and Hard of Hearing
24. Ross, M. (Feb-March 1990). Implications of Delay in Detection and Management of Deafness, The Volta Review, Vol. 92, Number 2. A.G. Bell Association for the Deaf and Hard of Hearing Washington D.C.
25. Seewald, R.C. (Ed.) 2000. A sound foundation through early amplification: Proceedings of an International conference. Phonak A.G. Alpiner, J.G. and McCarthy, P.A. (1987) Rehabilitative Audiology: Children and Adults. Williams and Wilkins, Baltimore, Managing Director
26. Websites: of Cochlear Implant Manufacturers

**PAPER 4**  
**AUDITORY FUNCTIONING AND ASSESSMENT**

**Objectives**

1. Describe auditory skill development in infants and young children
2. Describe acoustic phonetics and the terminology associated with it
3. Classify the speech sounds and link with the audiogram
4. Demonstrate skills in the formal and informal assessment of functional listening skills
5. Describe the hierarchy of listening skills and guide parents to develop them in children

**Unit 1: Auditory Skill Development**

**20 hours**

- 1.1 Need and importance of developing auditory skills
- 1.2 Neural plasticity
- 1.3 Behavioural responses in infants
- 1.4 Behavioural responses in young children
- 1.5 Deviations in behavioural responses in deaf and hard of hearing children

**Unit 2: Acoustic Phonetics**

**20 hours**

- 2.1 International Phonetic Alphabet
- 2.2 Ling's Phonetic Level Evaluation
- 2.3 Terminology associated with Phonetics
- 2.4 Vowels and Consonants

2.5 Suprasegmentals

**Unit3: Speech Acoustics and Environmental acoustics**

**20 hours**

- 3.1 Classification of speech sounds: Vowels
- 3.2 Classification of speech sounds: Consonants
- 3.3 How speech relates to the audiogram
- 3.4 Informal and formal tests
- 3.5 Recommendations for ideal listening conditions at home and at school

**Unit 4: Functional listening skill assessment**

**20 hours**

- 4.1 Importance and need for assessment
- 4.2 Ling's 6 sound test
- 4.3 Informal assessment of functional listening skills
- 4.4 Formal assessment of functional listening skills
- 4.5 Test results to make an informed recommendation to parents about management of their child with deafness/ hard of hearing.

**Unit 5: Listening skill development**

**20 hours**

- 5.1 Hierarchy of listening skills
- 5.2 Auditory skill development and the Listening Skills scale
- 5.3 Sequential planning through the hierarchy of listening skills
- 5.4 Understanding the development of auditory skills within this schema among parents
- 5.5 Coaching and guiding parents to develop auditory skills within this schema

**Tutorials :**

**20 Hours**

**a. Discussion on the following topics**

- Neuroanatomy
- Filling up the case history form
- Red Flags: what they are, identification, implications and management

- Neonatal hearing screening
- Audiogram and audiogram interpretation
- Analyzing behavioral responses in young children & infants with deafness/ hard of hearing
- Coaching and guiding parents to develop auditory skills

## **b. Reference work**

### **Reference**

1. CAP scale
2. Dickson, C. (1999) Auditory Curriculum
3. Erber, N. (1982) Auditory Training. A G Bell Association for the Deaf and Hard of Hearing, Inc, Washington DC
4. Estabrooks, W. (1998) Cochlear Implants for Kids, A.G. Bell Association for the deaf and hard of hearing, Washington D.C.
5. Ling, D. (1976) Speech and the hearing impaired child: Theory and Practice. A.G. Bell Association for the Deaf and Hard of Hearing. Washington D.C.
6. Ling, D. and Ling, A.H. (1985) Aural Habilitation: The Foundations of Verbal Learning in hearing impaired children. A.G. Bell Association for the Deaf and Hard of Hearing. Washington D.C.
7. Ling, D. (1989) Foundations of Spoken Language for hearing impaired children. A.G. Bell Association for the Deaf and Hard of Hearing. Washington D.C.
8. Madell, J.R. (1998). Behavioural Evaluation of Hearing in Infants and Young Children Thieme Medical Publishers, Inc. New York, N.Y.
9. Madell, J.R. and Flexer, C. (2008), Paediatric Audiology. Thieme Medical Publishers, Inc. New York, N.Y.
10. Meaningful Auditory Integration Scale (MAIS) and Infant-Toddler Meaningful Auditory Integration Scale (IT-MAIS)
11. Northern, J.L. and Downs, M.P. Hearing in children (4<sup>th</sup> Ed.) Williams and Wilkins, Baltimore, MD American Speech Language Hearing Association: Joint Committee on Infant Hearing: Position Statement (2007)

## DETAILS OF PRACTICUM AREAS

### I. Observation of Auditory Verbal Therapy Sessions

Each trainee will observe a LSLS Cert. AV therapist in individualized therapy with babies and young children for a minimum of 15 sessions of one hour duration each. These observation sessions must be spread evenly between months 2-5 of the training course. The trainee will record her observation of these sessions in an Auditory Verbal Lesson Plan format. Each such observation will be immediately followed by a minimum of a one hour discussion with the LSLS Cert AVT analyzing the session just observed. On completion, each trainee will observe 30 live/recorded individualized therapy sessions of one hour duration each independently

Each trainee will submit their observations in the format prescribed above and this will be evaluated by the LSLS Cert AVT. The observation of AVT sessions should be scheduled in such a way that the theoretical knowledge and skills required for observation have been taught prior to the actual observation.

### II. Practice Teaching

Each trainee will be given a minimum of 30 hours to plan 12 individualized auditory verbal therapy sessions as a part of practice teaching. Each trainee will demonstrate at least 12 hours of individualized Auditory verbal Therapy either live or in an unedited DVD format as advised by the supervising LSLS Cert. AVT. The practice teaching sessions must be spread evenly between months 2-6 of the training course. Each such session will be observed/assessed by a LSLS Cert. AVT using the Teacher Behaviors Rating Scale (TBRS) or equivalent formats and feedback on each session will be provided in writing. Each of these sessions/submissions must include a relevant case history of the child to date in a prescribed format.

### **III. Assessment and Report Writing**

Each trainee will be given a minimum of 10 hours to identify a child and to select appropriate method/s, technique/s and tool/s for assessment. Each trainee will carry out the assessment and submit the assessment report in a prescribed format for a minimum of 8 hours. These assignments will be set only after the relevant theory/skills have been appropriately taught and demonstrated. Each such submission must be evaluated by the LSLS Cert AVT individually.

### **IV. Observation of Audiological Management**

Teacher cum therapists will observe a qualified paediatric audiologist in a two-room sound treated set up in clinical practice for a minimum of 20 hours. These will cover observation of Behavioral Observation Audiometry (BOA), Visual Reinforcement Audiometry(VRA) and Conditioned Play Audiometry(CPA), pre and post-implant parent counseling sessions, Speech perception, hearing aid trials and Mapping sessions. Each such observation will be in a format prescribed by the supervising audiologist and will be followed by a discussion. Each such submission must be evaluated by the supervising audiologist individually. On completion each trainee will continue to observe the paediatric audiologist for 10 hours. The observation sessions should be scheduled in such a way that the theoretical knowledge and skills required for observation have been taught prior to the actual observation. These observation sessions must be spread evenly between months 2-5 of the training course

-----