

Curriculum Framework

Diploma in Hearing, Language and Speech -DHLS

Norms, Regulations & Programme Content

November, 2015

**Effective from Academic Session 2016-17
One Year Duration**



भारतीय पुनर्वास परिषद

**Rehabilitation Council of India
B-22, Qutab Institutional Area,
New Delhi - 110 016**

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Diploma in Hearing, Language and Speech (DHLS)

1. Aim

Aim of the program is to train a class of persons and equip them with basic skills for providing speech-language therapy, for conducting programs for early identification of persons with communication disorders, educating members of the community on prevention of communication disorders, conducting basic audiological testing, and for advising the hearing impaired at village, block/taluka and town levels. They will work under the guidance of a fully trained graduate or a postgraduate Speech & Hearing clinician.

2. Objectives

The objectives of the course are to train a class of speech and hearing therapists who would

- a) provide basic clinical services - assessment and management - to persons with communication disorders,
- b) carry out basic speech, language and hearing evaluation relevant to management
- c) educate members of the public on prevention and early identification of persons with communication disabilities
- d) conduct basic hearing testing
- e) advice the hearing impaired on hearing aids and other management options,
- f) provide listening training to persons with hearing impairment, and
- g) who would educate the members of the public on speech & hearing services and refer them to appropriate experts.

3. Duration of the course

The duration of the course will be one year, which can be completed in a maximum of two years from the date of admission to the programme.

4. Eligibility for admission

Candidates with the following are eligible for admission:

- a) A pass in 12th class with Physics, Chemistry, Biology, and Mathematics / Computer science.
- b) Candidates who are <21 years on the 1st July of the year of admission

5. Medium of instruction

English / Hindi or any other regional language

6. Criteria for passing

40% each in theory and IA.50% in each of the clinical examinations.

7. Theory and practical hours

Calculated on the basis of 7 hours / day, 5 days / week and 38 weeks / year
= 1330 hours per year

Theory Papers

DHLS 1	3 hrs / week for 25 weeks	- 75 hours
DHLS 2	3 hrs / week for 25 weeks	- 75 hours
DHLS 3	3 hrs / week for 25 weeks	- 75 hours
DHLS 4	3 hrs / week for 25 weeks	- 75 hours

Clinicals

A minimum of 250 hours for each of the 4 clinicals

Library / others

30 hours

8. Attendance

Minimum 80% attendance in theory and 90% in practical classes is required. Students may avail 20 days leave in a year.

9. Examination

There shall be one examination at the end of the course. The examination can be in English or any regional language

10. Examination Pattern

Paper	Title of the paper	No. of hours / week	Marks		
			Final* Exam	IA	Total
DHLS 1	Introduction to Audiology	3	70	30	100
DHLS 2	Introduction to Speech & Language Pathology	3	70	30	100
DHLS 3	Management of Communication Disorders - 1	3	70	30	100
DHLS 4	Management of Communication Disorders - 2	3	70	30	100
DHLS 5	Clinicals: Audiological assessment		50 [!]	50 [@]	100
DHLS 6	Clinicals: Audiological management		50 [!]	50 [@]	100
DHLS 7	Clinicals: Speech-language assessment		50 [!]	50 [@]	100
DHLS 8	Clinicals: Speech-language management		50 [!]	50 [@]	100
	Total		480	320	800

- * Duration of each examination - theory as well as clinicals - shall be 3 hours
- ! Marks to be awarded by the external examiner
- @ Final clinical exam shall be conducted by both internal and external examiners. Maximum marks shown here under IA are not internal assessment marks, but annual examination marks to be decided by the internal examiner.

11. Question paper pattern

The following is only an illustration. Important thing to note is that there has to be internal choice for each question.

Unit No.	Question	Sub-question	Marks
I	1 or 2	a.	7
		b.	7
II	3 or 4	a.	6
		b.	4
		c.	4
III	5 or 6	a.	8
		b.	6
IV	7 or 8	a.	6
		b.	8
V	9 or 10	a.	4
		b.	4
		c.	6

12. Declaration of results and award of Diploma

There will be a uniform pattern of declaration of results as under:

75% and above	-	Distinction
60-74.9%	-	First Division
50-59.9%	-	Second Division
40-49.9%	-	Pass Class

Diploma / certificate will be awarded to the successful candidates by the examining body nominated for this purpose by the Rehabilitation Council of India.

13. Guidelines for special assistance to examinees with disabilities

Based on the medical certificate issued by the competent authority, and as provided for CBSE /State Governments / UGC and NIOS for students with disabilities, special provisions are to be given in terms of providing scribes, computers, extra time, separate room and readers to student-trainees.

Syllabus

DHLS 1- Introduction to Audiology **75 Hours**

Unit 1: Sound and Hearing **15 Hours**

- Definition of sound
- Generation and transmission of sound
- Physical and psychological attributes of sound
- Range of human hearing
- Development of auditory behavior
- Functions of hearing, role of hearing in learning

Unit 2: Anatomy and Physiology of ear **15 Hours**

- Anatomy & Physiology of:
 - External ear
 - Middle ear including Eustachian tube
 - Inner ear
 - Vestibular system
 - Auditory nervous system

Unit 3: Hearing loss **15 Hours**

- Nature and type of hearing loss
- Causes of hearing loss
- Signs & symptoms of hearing loss
- Effects of hearing loss
- Prevention of hearing loss
- Early identification and its importance
- Associated problems

Unit 4: Evaluation of hearing **15 Hours**

- Methods of testing hearing, tuning fork, audiometry, parts of an audiometer, audiogram
- Procedure for obtaining an audiogram, different types of audiograms
- Factors affecting hearing evaluation
- Informal testing, methods of screening and different conditions for hearing testing, use of different stimuli in rural set/ups.

Unit 5: Early identification and prevention **15 Hours**

- Early Identification and prevention of hearing loss
- Importance and strategies
- Hearing screening
- In school set up
- In Hospital set up

- In camps
- Audiological equipment and their maintenance

References

- Dhingra, P.L. (1992). Diseases of Ear, Nose & Throat. Churchill Livingstone, New Delhi.
- Martin, F.N. (1994). Introduction to Audiology. V ed. NJ: Prentice Hall
- Rajeshwari, G., Animesh, B .&Yeshoda, K. (2014). Self-Learning Material for Diploma in Hearing, Language and Speech. Course III. Basic Medical Sciences, Mysore; All India Institute of Speech and Hearing
- Yathiraj, A. & C.S. Vanaja (2014). Self-Learning Material for Diploma in Hearing, Language and Speech. Course I. Introduction to Audiology, Mysore; All India Institute of Speech and Hearing.

DHLS 2 - Introduction to Speech & Language Pathology

75 Hours

Unit 1:

15 Hours

- Introduction to communication, language & speech
- Definitions of communication, language & speech
- Interrelation between speech, language & hearing
- Prerequisites of communication: speaker, listener, speech chain
- Functions of communication
- Types of language: Non-verbal: signs, symbols, gestures. Verbal: speech
- Parameters of language: orientation to phonology, morphology, semantics, syntax & pragmatics; secondary language-reading and writing
- Parameters of Speech: voice, articulation, fluency, prosody
- Normal speech and language
- Acquisition/ Development of Language and speech :
- Description of speech sounds and its acquisition/ development
- Stages in the development of language and important milestones
- Development of communications
- Factors affecting acquisition of speech, Language and communication.

Unit 2: Anatomy and physiology of speech mechanism

15 Hours

- Anatomy and physiology of speech mechanism
- Structure and functions of the speech mechanism
- Nervous system: Definition of neuron and synapse, action potential, division and functions of the nervous system, CNS and PNS, Speech and language related area of brain.
- Respiratory system: General outline, larynx and nasopharynx, mechanism of respiration; Physiology of respiration and role of respiration in speech
- Phonatory system: Anatomy & Physiology of larynx, physiology of phonation
- Resonatory and Articulatory system: Anatomy & Physiology of pharynx & oro-facial structures

Unit 3: Disorders of speech and language

15 Hours

- Disorders of speech
- Organic, structural, neurological and functional causes, general characteristics and symptoms of the following:
- Disorders of voice: pitch, quality and resonance
- Disorders of articulation
- Disorders of fluency
- Disorders of language
- Organic and functional causes, general characteristics and symptoms of delayed speech and language due to Mental retardation, Autism, Cerebral Palsy

Unit 4: Assessment of speech disorders

15 Hours

Need for assessment

- Differential diagnosis
- Tools used for assessment of speech disorders
- Screening and diagnostic assessment

Unit 5: Assessment of language disorders

15 Hours

- Need for assessment
- Differential diagnosis
- Tools used for assessment of speech disorders
- Screening and diagnostic assessment

References

- Dhingra, P.L. (1992). Diseases of Ear, Nose & Throat. Churchill Livingstone, New Delhi
- Rajeshwari, G., Animesh, B. & Yeshoda, K. (2014). Self-Learning Material for Diploma in Hearing, Language and Speech. Course III. Basic Medical Sciences, Mysore; All India Institute of Speech and Hearing
- Savithri, S.R. & Shyamala, K.C. (2014). Self-Learning Material for Diploma in Hearing, Language and Speech.
- Shipley, K. G. & McAfee, J. G. (2008). Assessment in Speech-Language Pathology: A Resource Manual. Cengage Learning; 4th edition
- Van Riper, C. (1978). Speech Correction: Principles and Methods. Prentice Hall; 6th edition
- Zemlin, W.R. (1981). Speech and Hearing Science: Anatomy and Physiology, (2nd Ed.). Englewood Cliffs, New Jersey: Prentice Hall.

DHLS 3 - Management of Communication Disorders- I **75 Hours**

Unit 1: Hearing aids and earmolds **15 Hours**

- Definition and importance of hearing aid
- Different parts of a hearing aid
- Different types of hearing aids
- Importance, fitting and maintenance of ear mold
- Selection of conventional hearing aids
- Use, care and maintenance of hearing aid - trouble shooting
- Trouble shooting and minor repairs of hearing aids
- Counselling on hearing aid acceptance, use and care, auditory learning, speech and language intervention and home training

Unit 2: Auditory learning **15 Hours**

- Auditory training- need and its importance.
- General principles and stages of auditory training,
- Materials needed,
- Assessment of auditory performance,
- Factors affecting auditory training
- Methods of recording auditory response and progress
- Games and activities for individual and group auditory training.

Unit 3: Speech reading **15 Hours**

- General principles of speech reading
- Methods of speech reading
- Cued speech
- Activities for speech reading in day to day communication
- Specific planning for speech reading lessons
- Factors affecting speech reading.

Unit 4: Education of children with hearing impairment **15 Hours**

- School education for children with disabilities
- Educational problems faced by children with hearing impairment
- Pre-school (preparatory) training
- Mainstreaming and segregation: Inclusive, integrated and special schools
- Curricular development
- Preparation and/ use of teaching aids and language work book.

Unit 5: Rehabilitation **15 Hours**

- Role of speech and hearing professionals in the education of children with hearing impairment and mental retardation
- Special schools for spastics and multiply disabled
- Organization of speech and hearing units for education
- Organization of community awareness programs and exhibitions and selecting the materials required, parent meeting.
- Team approach to school education
- Government schemes for the welfare of the disabled

References

- Martin, F.N. (1994). Introduction to Audiology. V ed. NJ: Prentice Hall
- Newby, H.A. & Popelka, G.R. (1992). Audiology. VI ed. NY: Appleton Century crofts
- Yathiraj, A. & C.S. Vanaja (2014). Self-Learning Material for Diploma in Hearing, Language and Speech. Course I. Introduction to Audiology, Mysore; All India Institute of Speech and Hearing.

DHLS 4- Management of Communication Disorders- II **75 Hours**

Unit 1: Disability issues **15 Hours**

- Concepts in disability, professional and personnel involved in disability
- Attitude of parents/caregivers and clients towards disability and rehabilitation
- Disability issues and society

Unit 2 : Management of speech disorders **15 Hours**

- Management of speech disorders
- General speech therapy approaches – rationale, setting goals/planning (short term, long term) steps –MIDVAS etc
- Management of
 - Articulation
 - Voice disorders
 - Fluency disorders

Unit 3 : Management of language disorders **15 Hours**

- General language therapy approaches – rationale, setting goals/planning (short term, long term) steps –MIDVAS etc
- Speech-language stimulation techniques
- Language therapy for children with:
 - Hearing impairment
 - Mental retardation
 - Cerebral palsy

Unit 4 : Educational issues **15 Hours**

- Education of children with speech and language disorders
- Educational problems faced by children with speech and language disorders
- Preparatory training, Types of educational set up (mainstreaming and segregation), curricular development, preparation and/ use of teaching aids and language work book
- Role of speech and hearing technician in education of children with speech and language disorders in educational settings
- Community based rehabilitation

Unit 5 : General issues in management **15 Hours**

- Prevention and Early identification of communication disorders
- Record Keeping - Need for record keeping, types of records
- Referrals
- Home based training
- Parent guidance and counselling

- Involvement of the society as a partner

References

- Savithri S.R.&Shyamala, K.C. (2014). Self-Learning Material for Diploma in Hearing, Language and Speech. Course II. Introduction to Speech-language pathology, Mysore; All India Institute of Speech and Hearing
- Van Riper, C. (1978). Speech Correction: Principles and Methods. Prentice Hall; 6th edition

DHLS 5 Clinicals 1 Audiological assessment**250 hours**

- Demonstrating parts and functions of pure tone audiometer and its controls. Familiarizing in handling different audiometers, hand held auditory screeners and screening procedures.
- Training in doing pure tone, speech and other audiometric procedures Examination of ear for wax, foreign body and other material - 5 subjects
- Testing normal ears under supervision - 5 subjects
- Audiograms of 5 adult cases of different types of hearing loss and submit it at the end of the term. Reviewing and interpreting 30 audiograms (already taken)
- Familiarity with conditioning procedure for audiometry
- Behavior observation and conditioning for audiometry on 5 subjects Observation of methods of testing children - Behavior observation and conditioning for audiometry on 5 subjects
- Need for calibration of audiological equipment and procedures. Biological calibration of audiometer
- To maintain record from case history to audiogram for 5 children and submit it by the end of the term. Each student should have independent case reports.
- To participate in at least two school screening and two camps

DHLS 6 Clinicals 2 Audiological Management**250 hours**

- Identification of different types of hearing aids, parts of a hearing aid
- Identification of faults and undertaking minor repair
- Assembling and managing group hearing aids
- Impression taking (children and adults) and making of ear molds. Students to present at least six pairs of ear molds - three pairs for adults and three pairs for children) for clinical examination at the end of term.
- Fitment of hearing aid in children and adults, and their maintenance. Do's and don'ts of hearing aid use. Maintain records of six clients, three children and three adults, and submit the same for clinical exam.
- Students should also maintain six records of testing high risk infants / children and submit them during clinical exam.
- Individual and family counselling relating to hearing impairment as well as hearing aids.
- Auditory training: Observation of auditory training with 5 clients and provide auditory training for 3 clients.
- Demonstration of group hearing aid and induction loop systems, connecting, dismantling, and trouble shooting and minor repairs.
- Preparing lesson plans with short and long term goals for two clients
- Preparing the students on understanding auditory environment where client lives and selecting auditory stimuli accordingly.
- Report writing and referral.

DHLS 7 Clinicals 3 Speech - language assessment**250 hours**

- Observation of, and completing, of case history and interview - minimum of 6 normal and 6 pathological children / adult clients

- Observation, and completion of, speech - language evaluation of 6 clients
- Observation of speech –language therapy of a minimum of 5 clients - at least a total of 15 sessions and recording observation of all these.
- Demonstration with recordings: normal aspects of pitch, loudness, normal and abnormal voice quality of 6 normal and 6 child / adult clients
- Demonstration with recordings of place and manner of articulation of 6 child/adult clients
- Demonstration with recordings of rhythm, rate, & intonation in the speech of 6 child/adult clients.
- Demonstration with recordings of fluency / dysfluency features in the speech of 6 normal child/adult clients (3 each)
- Practice in identifying different speech-language disorders from audio-video recorded samples and 6 clients in each category
- Assessment of voice (perceptual analysis), articulation, and dysfluency: Articulation tests
- Language – 3D LAT, REEL, SECS
- Report writing - Maintenance of diary - Writing referral notes to other professionals
- Therapy sessions for clients with hearing impairment, delayed speech - language (hearing impairment, mental retardation, cerebral palsy etc.), voice disorders, misarticulations, other language related disorders, and fluency disorders
- Participation in at least 2 school screening, 2 camps and any other community based assessment program

DHLS 8 Clinicals 4 Speech - language management

250 hours

- Speech-language therapy, counselling and home training programs for children and adults with hearing impairment, mental retardation and cerebral palsy
- Familiarity with tools used for speech and language therapy
- Observation, documentation and execution of speech therapeutic procedures for language disorders, voice disorders , articulation disorders, and fluency disorders
- Scheduling of therapy sessions, goal setting and termination of therapy.
- Selection and preparation of appropriate materials and activities
- Organizing parent guidance/counselling programs
- Suggesting appropriate activities for home training
- Visits to different speech & hearing centers /special schools
- Submit the speech and language evaluation reports of two cases
- Submit therapy reports of two cases assigned along with material developed
- Report writing : Home training, therapy and therapy results, community services
- Maintenance of diary, pre-therapy report and lesson plans
- Pretherapy report, lesson plan, progress report
- Home training for parents and report writing

Requirements for starting the course of Diploma in Hearing, Language and Speech (DHLS)

The following are the specific requirements for starting a Diploma in Hearing, Language and Speech with an intake of 20 students in addition to the general documented by RCI.

Infrastructure

The following infrastructure is a must for a batch of 20 students.

1.0 Staff

1.1 Core faculty

- | | | |
|----|---|---|
| a) | Lecturer in Audiology
M. Sc. (Audiology) or M.Sc (Sp. & Hg.) /
or an equivalent qualification with 2 years' experience | 1 |
| b) | Lecturer in Speech – Language Pathology
M. Sc. (Speech- Language Pathology) or M.Sc (Sp. & Hg.)
or an equivalent qualification with 2 years' experience | 1 |
| c) | Guest faculty (as required) | |

1.2 Supporting Professional Staff

- | | | |
|----|--|---|
| a) | Clinical Supervisor (Audiology)
M. Sc (Speech – Language Pathology) or M.Sc (Sp. & Hg.) | 1 |
| b) | Clinical Supervisor (Speech- Language Pathology)
M. Sc (Speech- Language Pathology) or M.Sc (Sp. & Hg.) | 1 |

1.3 Supporting Staff

- | | | |
|----|-------------------------|---|
| a) | Aministrative Assistant | 1 |
| b) | Library Assistant | 1 |
| c) | Attenders | 2 |

2.0 Equipment

- a) Clinical audiometer
- b) Hearing aids (all makes & models)
- c) Ear mold and hearing aid repair Lab
- d) Speech trainer
- e) Hearing aid repair kit
- f) Group hearing aids
- g) Sound recorder
- h) Therapy material
- i) Material for auditory training
- j) Models of the ear, larynx, brain etc.

3.0 Space

a)	Class room	1	20' x 15'
b)	Audiometric room (2-room set up)	1	10' x 10'
c)	Staff room/office	1	10' x 15'
d)	Individual therapy rooms	4	10' x 8'
e)	Group therapy rooms	1	20' x 15'
f)	Ear mold & hearing aid repair lab	1	20' x 15'
g)	Patient waiting hall	1	20' x 15'
h)	Library	1	20' x 15'
i)	Play area (Indoor/outdoor)		
j)	Hostel (as required)		
k)	Disabled friendly toilets (as required)		

4.0 Library

The following books are minimum

- Dhingra, P.L. (1992). Diseases of Ear, Nose & Throat. Churchill Livingstone, New Delhi.
- Martin, F.N. (1994). Introduction to Audiology. V ed. NJ: Prentice Hall
- Newby, H.A. & Popelka, G.R. (1992). Audiology. VI ed. NY: Appleton CenturyCrofts
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- Van Riper, C. (1978). Speech Correction: Principles and Methods. Prentice Hall; 6th edition
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- Zemlin, W.R. (1981). Speech and Hearing Science: Anatomy and Physiology, (2nd Ed.). Englewood Cliffs, New Jersey: Prentice Hall.



भारतीय पुनर्वास परिषद्

2-6/RCI/2015

भारतीय पुनर्वास परिषद्

(सामाजिक न्याय और अधिकारिता मंत्रालय, विकलांगजन सशक्तिकरण विभाग के अधीन एक सांविधिक निकाय)

REHABILITATION COUNCIL OF INDIA

(A Statutory Body under the Ministry of Social Justice and Empowerment,
Department of Empowerment of Persons with Disabilities)

08/08/2016

CIRCULAR

Sub. : Enhancement of maximum age limit for admission into Diploma in Hearing Language & Speech (DHLS) - reg.

Your kind attention is invited to the syllabus of Diploma in Hearing Language & Speech (DHLS), 2016 regarding eligibility for admission criteria (Sr. No. 4). In this context, the Council has received requests/representations from many quarters for enhancement of maximum age limit.

Therefore keeping in view the practical difficulties being faced by the institutions / organizations, the Council has decided to enhance the maximum age limit from 21 years to 25 years (on the 1st July of the year of admission) for admission into DHLS.

It is to inform you that the last date of admission to certificate and diploma programmes/courses has been extended upto 20/08/2016.

This issues with the approval of the competent authority.

(S K Srivastava)
Member Secretary

1. e-mail to all concerned.
2. RCI Website

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