सत्यमेव जयते

भारतीय पुनर्वास परिषद्

Diploma in Education-Special Education

(Visual Impairment)

D.Ed.Spl.Ed. (VI)

July, 2023

(w.e.f. 2023-24)

REHABILITATION COUNCIL OF INDIA
(Statutory Body of the Ministry of Social Justice & Empowerment)
Department of Empowerment of Persons with Disabilities (Divyangjan)
Government of India
B-22, Qutab Institutional Area
New Delhi – 110 016
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1.0 Preamble

The fundamental aim of education is to generate learners who are motivated, effective and are increasingly responsible and contributory citizens. The 21st century additionally requires that the learners also match the global requirements by being creative, communicative, critical thinkers and collaborative. While the obligation of developing these abilities in learner rests on all stakeholders, the teachers' invariably form the pivot. So, teacher preparation and development have a significant role in the national and global development.

The 21st century learning has also seen a change in the perspectives towards the learners. It is increasingly recognized that they are diverse and diversity is valuable. The United Nations Convention of Rights of Persons with Disabilities (UNCRPD) 2006, to which India is a signatory notably views 'disability has a human diversity'. So, the educational acts and policies in India such as Right to Free and Compulsory Education (RTE) Act 2009 and its amendment in 2012, the Rights of Persons with Disabilities (RPwD) Act 2016 and the National Education Policy (NEP) 2020 have provided special attention and made provisions for education of students with disabilities.

The Rehabilitation Council of India (RCI, 1992) is a statutory body under the Ministry of Social Justice & Empowerment. RCI is mandated for the professional development through quality training programs to strengthen education and rehabilitation of persons with disabilities. RCI therefore develops standardized curricula and monitors the human resource development which are conducted through RCI recognized institutes and Universities for a range of programs, i.e., Certificate to Master level programs.

The present Diploma program in Special Education (D.Ed. Special Education (Visual Impairment) is formulated to prepare special teachers to work with children with disabilities in varying settings such as early intervention centers, preschools and elementary schools both in special and inclusive settings as well as in home training or if the need arises in the blended form of programs. This programme is aimed at meeting the educational needs of **children with blindness and low vision** in aforesaid educational settings.

2.0 Nomenclature of the program: Diploma in Education-Special Education (Visual Impairment) i.e. D.Ed.Spl.Ed.(VI)

Objectives of Program:

The Program of Diploma in Education-Special Education (Visual Impairment) is developed with following objectives:

On the completion of this programme, the student teachers will be able to:

- Develop an understanding of varying disabilities and their implications;
- Gain knowledge of typical growth and development of learners and realize the psychological aspects influencing learning and education;
- Be aware of the underlying philosophies, evolutionary practices and the policy provisions facilitating education of children with disabilities;
- Develop an understanding about the concept, construct and facilitators of inclusive education;
- Realize the importance and role of family and community as a catalyst in the education of children with disabilities;
- Acquire an understanding of nature and needs of Children with blindness and low Vision;
- Describe Psycho-Social and educational implications of Blindness and Low Vision;
- Acquire and ability to use methods of teaching various school subjects to children with Blindness and Low Vision;
- Gain proficiency in the use of special equipment needed by children with Blindness and Low Vision for their education;
- Acquire competencies of teaching various expanded core curriculum skills and activities to children with Blindness and Low Vision;
- Acquire the content knowledge and pedagogical skills of teaching school subjects.

3.0 Scope of the Programme

The D.Ed.Spl.Ed. (Visual Impairment) programme will especially help the student-teachers to develop following competencies:

3.1 Knowledge based competencies:

- Relating to the identification of various disabilities and their associated conditions;
- Relating to the assessment of differential needs of learners with Blindness and Low Vision;
- Relating to providing guidance and counselling to parents and guardians of children with disabilities for availing the facilities contained in various legislations and policies of State and Central Governments.

3.2. Skills based Competencies:

- Assessment and identification of learners with Blindness and Low Vision using multidisciplinary approach
- Interventional strategies of addressing learning styles and preferences.
- Curricular strategies of pedagogical approaches, adaptations and assessments.

3.3. Values or Behavior based Competencies:

- Empowering families for equal partnership and advocacy of children;
- Community involvement promoting school culture and ethos for inclusive educational practices;
- Mobilizing resource and support.

3.4. Employment Opportunities:

It is envisaged that such a programme would widen the horizon for the teacher trainee as they, on the completion of the programme, would be able to teach in special schools, regular inclusive schools at elementary level, work in early intervention and preschool settings or undertake home based teaching to support those with high support needs. In all such set ups, the successful trainee can practice online and blended teaching with confidence.

4.0 General Framework of the Programme

The Diploma in Education-Special Education (Visual Impairment) programme consists of 5 Common Courses and 7 Specialization Courses pertaining to the education of children with blindness and low vision.

Each theory course has a total of 75 hours for curriculum transaction. The total weightage for each course in terms of marks will be 75, 40 percent internal and 60 percent external.

In terms of credit, the entire program is prepared for 120 credits divided into two parts; theory- 60 credits and practical-60 credits. For curriculum transaction, each credit will be equal to 15 hours for theory and 25 hours for practical.

5.0. Duration of the Programme

The duration of the programme will be of 2 years. Each year will have 1200 hours leading to 40 credits for each year (30 hours = 1 credit). The weightage to the programme will be 60% practical and 40% theory

i) The first year will comprise of 720 hours of practical and 480 hours of theory.

ii) The second year will also have 1200 hours which will include 720 hours of practical and 480 hours of theory. The theory hours will also include 60 hours of Employability skills. The resources for the separate module are freely downloadable at www.employabilityskills.net. This module will enable and empower the trainees with readiness skills for applying, preparing for interviews and developing soft skills for working as professionals in supporting diverse clients across different setups. The module will comprise of practicals and theory and will be assessed formatively for internal marks and summatively with a final exam.

6.0 Eligibility

Students who have passed 10+2 or equivalent with 50% of marks in any stream are eligible for the course.

7.0 Medium of Instruction

The medium of instruction will be English / Hindi / Regional or state specific language

8.0 Methodology

The methodology of the programme would include lectures, demonstration, project work, and discussions, exposure visits to different schools / rehabilitation program, participation in community meetings, medical camps and community development programmes, practice-teaching and internship in the disability intervention programmes at grassroots level.

9.0 Staff Requirements

The programme should have two faculty at least at the level of lecturer/assistant professor and one instructor for each year (as mentioned under teaching faculty) of the programme and one will assume the charge of coordinator / head, thus requiring a total teaching staff of six. In addition to this, guest faculty may be invited to teach specific topics.

9.1 Qualifications of the Teaching Faculty/Staff

Essential qualifications:

a. Masters in Social Sciences, Humanities & Sciences

b. M.Ed.Spl.Ed. (VI) with two years of experience (post qualification) of teaching in special School for children with visual impairment

Or

B.Ed.Spl.Ed. (VI) with five years of experience (post qualification) of teaching in special School for children with visual impairment

Or

DSE (VI) / D.Ed.Spl.Ed. (VI) with 10 years of experience (post qualification) of teaching in special school for children with visual impairment.

c. The candidate must have valid registration certificate from RCI.

NOTE:

1. Whosoever from the full-time faculty position is the senior most by appointment will function as the Programme Coordinator.

2. In case of a new institution, it can start with two core faculty as above, and two more full time faculty in Special Education with qualification as given above must be appointed before commencement of 3rd semester.

Instructor(Technical)

Two instructors should be appointed having a qualification of Bachelor degree in any subject with D.Ed.Spl.Ed.(VI) with valid RCI registration. In case of new institution, one full time instructor must be appointed before commencement of 3rd semester.

9.2 Staff (Non-teaching)

1. Librarian/Library Assistant (01)
2. Multi-Task Staff (for typing, record keeping and accounts) (01)
3. Peon (01)
4. Watchman (01)

9.3 Visiting Faculty:

As per requirement

10.0 Intake capacity:

The intake for each year of the Programme will be maximum of 35 as per RCI norms.

11.0 Minimum Attendance

Eighty per cent minimum attendance is required both in theory and practical to be eligible to appear in the semester end examination.

12.0 Examination Scheme:

The examinations will be conducted at the end of first and second year. The RCI has formulated a Scheme of examination and the designated agency will conduct the examinations as per RCI's Scheme of Examination.

13.0 Requirements of Physical Infrastructure and Materials

13.1 Space

Sl.No.	Type of Facilities (Essential)	Area	Remarks
1.	Class Room – 2	40 sq. m. each	
2.	Multipurpose Room/Hall -1	60 sq. m.	
3.	Library-1	60 sq. m.	5 Computers & Internet
4.	Toilet (Male-1, Female-1)	04 sq.m. each	

5.	Principal's Room -1	15 sq. m.	
6.	Resource Room- 1	30 sq. m.	
7.	Faculty Room-1	40 sq. m.	
8.	Office Room-1	25 sq. m.	
9.	Lab. for Psychology/ICT-1	30 sq. m.	

Sl.No.	**Type of Facilities (Desirable)**	**Area**	**Remarks**
12.	Hostel for Trainees	-As per need	
13.	Space for Recreation and Sports	500 sq. m.	If not available, then collaboration with nearby Institute/ University
14.	Staff Quarters	As per need	

13.2 Material

Furniture for Staff:

1. Full time staff	Tables	-	6
	Chairs	-	5
	Cupboards	-	5
Teaching Faculty – 2 (At the level of lecturer Assistant professor) and 1 instructor for 1st year and equal no of teaching Faculty for the 2nd year ling 6 – 4 & 2 (Tables – 6, Chairs – 6) Visiting Faculty (as per need).	Tables	-	2
	Chairs	-	2
4.. multi-task staff -cum-Accountant	Table	-	1
	Chair	-	1
5. Librarian/Library Assistant	Table	-	1
	Chair	-	1
6. Peon	Chair	-	1
	Stool	-	1 (or suitable furniture)

Furniture and Equipment for the Office

1. Cupboards (Steel)	04
2. Filing Cabinet	01
3. Computer with Printer	01

4. Phone	01
5.Photocopying Machine/Printer	01
6. Any context specific requirement	

Furniture and Equipment for Classroom

1. Tables (for students)	35
2. Chairs (for students)	35
3. Audio Visual equipment (LCD)	02
4. Black Board	02

Furniture for Library (minimum)

1. Library cupboards	10
2. Library tables (large)	04
3. Library chairs	25

In addition to the foregoing, a Training Centre wishing to offer this programme should have the following special equipment:

A. Braille writing slates of different types (30 each)

B. Braillers (5)

C. Abacus (60)

D. Taylor frames (30) along with arithmetic and algebra types

E. Tactile Geometry kit (20 sets)

F. Long canes (30)

G. Folding Canes (30)

H. 2 computers with screen reading and magnification software

I. Thermoforming machine (1)

J. Small electronic Braille embosser (1)

13.3 Minimum Requirements for Practice Teaching Schools Infrastructure

13.3.1 Each training institute conducting the D.Ed.Spl.Ed.(VI) must have own special school with a minimum of 50 students with visual impairment having UDID numbers or UDID enrolment numbers with disability certificate. These students need to be varying in grades and age groups for exposure of student trainees for early intervention, preschool and elementary classes. School should be enrolled for UDISE and fill in all data required for UDISE.

13.3.2 For promoting inclusive education as per RPwD Act 2016 the training institute conducting the D.Ed.Spl.Ed.(VI) may have their own inclusive schools having a minimum of 50 students with disabilities including 40 students with visual impairment at primary level impairment having UDID numbers or UDID enrolment numbers with disability certificate.

School should be enrolled for UDISE and fill in all data required for UDISE.

14.0. Library Material

1. Minimum eighty percent of the prescribed (at least 3 copies each) as mentioned in suggested reading list of each paper, and sixty percent (at least 1 copy each) of the desirable references. At least twenty percent of the books should be in Hindi or regional language.
2. Journals (at least 2) peer- reviewed journals on related disability.

15.0 Certification as Registered Personnel

It is mandatory for every rehabilitation professional / personnel to obtain a "Registered Personnel/ Professional Certificate" from the Rehabilitation Council of India to work in the field of disability rehabilitation and special education in India. A Student who has attended the training and completed the requirements for all modules successfully will be qualified as a Special Educator - Personnel and be eligible to work in the field of Rehabilitation in India as a Special Educator (Visual Impairment). As continuous professional growth is necessary for the renewal of the certificate, the rehabilitation professional / personnel should undergo in-service programme periodically to update their professional knowledge. Each registered professional/personnel will be required to get himself /herself renew his registration periodically. The periodicity will be decided by the council from time to time. The activities for enrichment training programmes in the form of Continuous Rehabilitation Education (CRE) is decided by the RCI.

16.0. COURSEWISE HOURS, CREDITS AND MARKS DISTRIBUTION

16.1. Theory

Semester	Course	Teaching Hours	Credits	Marks		
				Internal	External	Total
I	**1.Introduction to Disabilities** (common Course)	75	2.5	30	45	75
	2.Psycho-Educational implications of Blindness and Low Vision (Specialization course)	75	2.5	30	45	75
	3.Pedagogy of Environmental Science (EVS) and Social Science (Specialization course)	75	2.5	30	45	75
	Total of Semester I (Theory)	**225**	**7.5**	**90**	**135**	**225**

Semester	Course	Teaching Hours	Credits	Marks

II	4.**Child Development and Learning** (Common Course)	75	2.5	30	45	75
	5.Education of Children with Low Vision (Specialization Course)	75	2.5	30	45	75
	6.**Pedagogy of Hindi/State language and English education** (Specialization Course)	75	2.5	30	45	75
	Total of Semester II (Theory)	**225**	**7.5**	**90**	**135**	**225**

	Total of Semester I and II (Theory)	**450**	**15**	**180**	**270**	**450**

Semester	**Course**	**Teaching Hours**	**Credits**	**Marks**		
III	7.**Education in emerging Indian society and school administration** (Common Course)	75	2.5	30	45	75
	8. **Teaching of Expanded Core Curriculum to Children with Blindness and Low vision** (Specialization Course)	75	2.5	30	45	75
	9. Pedagogy of Science Education (Specialization Course)	75	2.5	30	45	75
	Total of Semester III (Theory)	**225**	**7.5**	**90**	**135**	**225**

Semester	**Course**	**Teaching Hours**	**Credits**	**Marks**		
IV	**10.Inclusive Education** (common Course)	60	2	30	45	75
	11.Family and Community (common Course)	45	1.5	30	45	75
	12.**Pedagogy of Mathematics Education (** Specialization Course)	60	2	30	45	75
	Employability Skills (Soft Skills)	60	2			
	Total of Semester IV (Theory)	**225**	**7.5**	**90**	**135**	**225**

	Total of Semester III and IV (Theory)	**450**	**15**	**180**	**270**	**450**

	Grand Total of Semester I+II+III+IV (Theory)	**900**	**30**	**360**	**540**	**900**

16.2 Practicals

Semester	Course	Practical Hrs.	Credits
I	**1. Braille I - Standard English Braille**	75	2.5
	2. Orientation and Mobility	75	2.5
	3. Use of Special Appliances	75	2.5
	4. Classroom observation and preparation of lesson plan	75	2.5
	5. Teaching of orientation and Mobility and activities of daily living to children with Low Vision	75	2.5
	Total of Semester I (Practical)	**375 Hours**	**12.5**

Semester	Course	Practical Hrs.	Credits
II	**6. Braille II- Hindi/State Language**	75	2.5
	7. Orientation and Mobility – II	75	2.5
	8. Learning Environment and sensitivity for children with low vision	75	2.5
	9. Preparation of low cost Teaching Learning Material	75	2.5
	10. Practice Teaching	75	2.5
	Total of Semester II (Practical)	**375 Hours**	**12.5**

	Total of Semester I and II (Practical)	**750**	**25**

Semester	Course	Practical Hrs.	Credits
III	**11. Braille – III (100 Hrs)**	75	2.5
	12. Use of Special Appliances – II	75	2.5
	13. Information and communication technology	75	2.5
	14. Practice Teaching – II	75	2.5
	15. Technology for Children with Low vision	75	2.5
	Total of Semester III (Practical)	**375 Hours**	**12.5**

Semester	Course	Practical Hrs.	Credits
IV	**16. Braille – IV**	63	2.1
	17. Use of Special Appliances – III	63	2.1
	18. Teaching organizing co-curricular activities for Children with Blindness and Low Vision	63	2.1
	19. Practice Teaching – III	63	2.1

	20. Community based Project Work	63	2.1
	21. Assessment of Children with Low Vision	60	2
	Total of Semester IV (Practical)	**375 Hours**	**12.5**

	Total of Semester III and IV (Practical)	**750**	**25**

	Grand Total of Semester I+II+III+IV (Practicals)	**1500**	**50**

Grand Total of I and II Semesters

Grand Total of Semester I +II (Theory and Practicals)	**Theory (Hours)**	**Practical (Hours)**	**Total Hours**	**Theory (Credits)**	**Practical Credits**	**Total Credits**
	450	**750**	**1200**	**15**	**25**	**40**

Grand Total of III and IV Semesters

Grand Total of Semester III+IV (Theory and Practicals)	**Theory (Hours)**	**Practical (Hours)**	**Total Hours**	**Theory (Credits)**	**Practical Credits**	**Total Credits**
	450	**750**	**1200**	**15**	**25**	**40**

Grand Total of the Course

Grand Total of Semester I+II+III+IV (Theory and Practicals)	**Theory (Hours)**	**Practical (Hours)**	**Total Hours**	**Theory (Credits)**	**Practical Credits**	**Total Credits**
	900	**1500**	**2400**	**30**	**50**	**80**

17.0 The details of various courses

17.1 Semester I

COURSE - I

INTRODUCTION TO DISABILITIES

Total Hours = 75 Total Credits= 2.5 Total Marks= 75 (Internal 30, External 45)

Learning outcomes:

On the completion of this course, the student-teachers will be able to:

- Explain the historical perspectives and paradigm shift in the models of disabilities
- Demonstrate knowledge about various causes and preventive aspects about different disabilities.
- Describe the educational needs, implications and challenges in the management of various types of disabilities.
- Describe and analyse the importance of early identification and intervention of children with disabilities and twice exceptional (2e) children.
- Explain the importance of different agencies in human resource development

Unit 1: Understanding Disability

1.1 Historical perspectives of Disability - National and International & Models of Disability;

1.2 Concept, Meaning and Definition - Handicap, Impairment, Disability, activity limitation, habilitation and Rehabilitation;

1.3 Definition, categories (Benchmark Disabilities) & the legal provisions for PWDs in India;

1.4 An overview of Causes, Prevention, prevalence & demographic profile of disability: National and Global;

1.5 Concept, meaning and importance of Cross Disability Approach and interventions;

Unit 2: Definition, Causes & Prevention, Types, Educational Implication, and Management of

2.1 Locomotor Disability-Poliomyelitis, Cerebral Palsy/Muscular Dystrophy;

2.2 Visual Impairment-Blindness and Low Vision;

2.3 Hearing Impairment-Deafness and Hard of Hearing;

2.4 Speech and language Disorder;

2.5 Deaf-blindness and multiple disabilities;

Unit 3: Definition, Causes & Preventive measures, Types, Educational Implications, and Management of-

3.1 Intellectual Disability;

3.2 Specific Learning Disabilities;

3.3 Autism Spectrum Disorder;

3.4 Mental Illness, Multiple Disabilities;

3.5 Chronic Neurological conditions and Blood Disorders;

Unit 4: Early Identification and Intervention:

4.1 Concept, need, importance and domains of early identification and intervention of disabilities and twice exceptional children;

4.2 Organising Cross Disability Early Intervention services;

4.3 Screening and assessments of disabilities and twice exceptional children;

4.4 Role of parents, community, ECEC and other stakeholders in early intervention as per RPD- 2016 and NEP 2020;

4.5 Models of early intervention-(home-based, centre-based, hospital-based, combination) with reference to transition from home to school;

Unit 5: Human Resource in Disability Sector:

5.1 Human resource development in disability sector – Current status, Needs, Issues and the importance of working within an ethical framework;

5.2 Role of international bodies (International Disability Alliance (IDA) UNESCO, UNICEF UNDP, WHO) in Disability Rehabilitation Services;

5.3 International conventions and Policies such as UNCRPD, MDGs and SDGs;

5.4 Role of National Institutes (AYJNISLD, ISLRTC, NIEPID, NIEPMD, NIEPVD, NILD, NIMHR, PDUNIPPD, SVNIRTAR) in Disability Rehabilitation Services;

5.5 Role of Information and Communication Technology (ICT) in disability inclusive services and development programs;

Suggested readings:

Abhi-Prerna (n.d.) Screening and identification. Ahemdabad, India: Sense International (India), Resource and Information Unit on Deaf blindness

Agrawal, A., Shukla, D. (2006). Handbook of Neuro-Rehabilitation., (1st Ed.). Hyderabad, Paras Medical Publication.

Ashman, A. & Elkins, J. Eds. (2009).Education for Inclusion and Diversity. French's Forest: Pearson Education Australia

Bala, J.M., Rao, D.B., (2012). Hearing Impaired Student, (2nd Ed.). New Delhi, Discovery Publishing House.

Banerjee, G. (2004). Legal rights of persons with disabilities. New Delhi, India: Rehabilitation Council of India

Dunn, L.M., (1963). Exceptional children in the school special: Education in transition. Holt Rinehart and Winston, USA.

Fox, A. M. (2005). An introduction to neuro-developmental disorders of children. New Delhi: The National Trust

Gense, M. &Gense, D. (2005).Autism spectrum disorders and visual impairment. New York: AFB Press

GOI.(2016). The Rights of persons with Disabilities Act, 2016. New Delhi: Commercial Law Publishers (India Pvt. Ltd

Hinchcliffe, A. (2003). Children with cerebral palsy: A manual for therapists, parents and community workers. New Delhi, India: Vista.

Huebner, K. M., Prickett, J. G., Welch, T. R., &Joffee, E. (Eds.). (1995). Hand in hand: Essentials of communication and orientation and mobility for your students who are deaf-blind (Vol. 1). New York: AFB Press.

Kusuma, A., Reddy, L., Ramar, R., (2000). Education of Children with Special Needs, (1st Ed.). New Delhi, Discovery Publishing House.

Lim, Levan &Quah, M.M. (2004).Educating Learners with diverse abilities. Singapore: McGraw-Hill Education Asia

Menon, S & Feroze, V.R. (2014). Gifted: Inspiring Stories of people with disabilities. India: Random House publishers.

Miles, B., &Riggio, M. (Eds.). (1999). Remarkable conversations: A guide to developing meaningful communication with children and young adults who are deafblind. Watertown, MA: Perkins School for the Blind

Narsimhan, M.C. & Mukherjee, A. K. (1986). Disability: A continuing Challenge, New Delhi: Willy Eastern Limited

Rao, D.B., Kumari, A.R., Sundari, S.R., (2004) Deaf Education, (1st ed.). New Delhi, Sonali Publication.

Rozario, J., Karanth, P., (2003). Learning Disability in India: Willing the Mind to Learn, (1sted.). New Delhi, Saga Publications India Pvt. Ltd.

Sharma, H. &Sobti, T (2018).An Introduction to Sustainable Development Goals. Asia: PEP

Sharma, M.C. & Sharma, A.K. Eds (2004). Discrimination based on sex, caste, religion and Disability: Addressing through educational challenges. New Delhi: NCTE

Singh, D., (2014). Disability and Special Needs-Dimensions and Perspectives (1st Ed.). New Delhi: Kanishka Publication.

Singh, J.P., Dash, M.K. (2006). Disability Development of India Rehabilitation Council of India, (2nd Ed.). New Delhi: Kanishka Publication.

United Nations Educational, Scientific, and Cultural Organization.(n.d.). It's about ability: An explanation of the Convention on the Rights of Persons with Disabilities. Geneva, Switzerland: UNESCO

Watkins, S. (Ed.). (1989). INSITE model: A model of home intervention for infants, toddlers and preschool aged multihandicapped sensory impaired children. (Vols. 1 & 2). Logan: Utah State University.

Werner, D., Alkazi, R., Mirchandani, V. (1994). Disabled Village Children, (1st Ed.). New Delhi. Voluntary Health Association of India

COURSE - II

PSYCHO-EDUCATIONAL IMPLICATIONS OF BLINDNESS AND LOW VISION

Total Hours = 75 Total Credits= 2.5 Total Marks= 75 (Internal 30, External 45)

Learning Outcomes:

On the Completion of this Course, the teacher trainee will be able to:

- Describe the structure and functions of the human eye and common eye diseases;
- Discuss the implications of blindness and low vision on development;
- Demonstrate the skills required for teaching expanded core curriculum activities to children with blindness and low vision;
- Discuss the change in attitude of society towards persons with blindness and low vision;
- Acquire necessary skills and competencies to recognize special needs of children with visual impairment and additional disabilities and demonstrate appropriate interventions;

Course Content

Unit 1: Anatomy and Physiology of Human Eye

1.1. Structure of the human eye

1.2. Physiology of Vision

1.3. Refraction and Refractive Errors: Myopia, Hyperopia, Astigmatism and Presbyopia

1.4. Common Eye Diseases and their Implications: Conjunctivitis, Amblyopia, Nystagmus, Strabismus, Exophthalmia, Corneal Ulcer, Keratoconus, Cataract, Aphakia, Glaucoma, Albinism, Macular Degeneration, Retinitis Pigmentosa, Retinopathy of Prematurity, Retinal Detachment, trachoma and Optic Atrophy;

1.5. Prevention of Blindness and Eye care;

Unit 2: Effects of Blindness and Low Vision

Myths and Stereotypes about persons with blindness and low vision.

2.1 Limitations imposed by blindness and low vision;

2.2 Psycho-social implications of blindness and low vision;

2.3 Effect of congenital and adventitious blindness and low vision on motor, cognitive language and socio-emotional development;

2.4 Attitude of family and community towards persons with blindness and low vision;

2.5 myths and stereotypes about blindness and low vision;

Unit 3. Educational Perspectives: Blindness and Low Vision

3.1 Aims and objectives of education of children with blindness and low vision;

3.2 Principles of teaching children with blindness and low vision;

3.3 Use of residual vision for educational purposes;

3.4 Early childhood Education- need and importance;

3.5 Educational devices: conventional devices and technology based

Unit 4: Children with Visual Impairment with Additional disabilities (VIAD)

4.1 Concept and definition of children with VIAD;

4.2 Types of additional disabilities; Common causes and syndromes;

4.3 Characteristics of children with VIAD/Deaf blindness;

4.4 Impact of Multisensory impairment on development of child with VIAD;

4.5 Early identification, early intervention and its significance in education of the children with visual Impairment with additional disabilities;

Unit 5: Management of Children with VIAD

5.1. Assessment of children with VIAD;

5.2. Teaching strategies for children with VIAD;

5.3. Understanding communication and modes of communication for children with visual impairment and other sensorial disorders-implications;

5.4. Architectural modifications for persons with visual impairment having locomotor disorders;

5.5. Role of multidisciplinary team in the education of VIAD Children;

Suggested readings:

Carroll,T.J. : Blindness: What It Is, What It Does And How To Live With It. Boston, Little BrownCo.,1961.

Larry Schwab (1987), Primary Eye Care in Developing Nations, Oxford University Press

Kitchlu, T.N. (1991),A Century of Blind Welfare in India. Delhi: Penman Publishers

Kundu, C.L (ed.) (2003), Disability Status India, Rehabilitation Council of India: New Delhi

Lowenfeld, B. (1973),The visually handicapped child in school and Society. John Day Company: New York

National Institute for the Visually Handicapped (1990). Handbook for Teachers of the Blind: Dehradun.

Scholl, G. T. (1986), Foundations of the education for blind and visually handicapped children and youth: Theory and Practice. AFB Press: New York.

Warren D.H (1983), Blindness and Early Childhood Development. AFB Press: New York.

Baine, D (1991): Handicapped children in developing countries: Assessment, curriculum and instruction, Edmonton, AB: Vector/Educational Psychology, University of Alberta.

De Jong, C. Raemakers, Marlies; &Zambone, A (2002): Learning by Doing Together. A functional curriculum approach for children and youth with multiple impairments. Bartimeus-ICEVI Publication.

Noonan &McCormic (1993): Early intervention in natural environments, Methods and procedures, California: Wadsworth Inc.

Snell, M. (Ed.) (1987): Systematic instruction of persons with severe handicaps. Columbus: Charles E. Merrill Publishing Company.

Punani and Rawal (2000) Visual Impairment Handbook, Published by Blind People's Association

Coonts, T (2005) Teaching Strategies who are deaffind, Fact Sheet #4 Nebraska deafblind project

Hodges, L (2000) Effective teaching and learning in S. Aitken M. Buultjens, C. Clark. J.T. Eyer, L. Pease (eds) Teaching Children who are deafblind; New York: David Falton Publishers.

COURSE - III

PEDAGOGY OF ENVIRONMENTAL SCIENCE (EVS) AND SOCIAL SCIENCE

Total Hours = 75 **Total Credits= 2.5** **Total Marks= 75 (Internal 30, External 45)**

Learning outcomes

On the completion of this course, the student-teachers will be able to:

- Explain the concept, nature and objectives of EVS and Social Science to children with blindness and low vision;
- Demonstrate understanding of the problems and limitations faced by children with blindness and low vision in learning various concepts included in EVS and Social Science;
- Describe various methods and techniques of teaching EVS and Social Science and their use for learners with blindness and low vision;
- Explain the concept of History, Geography and Civics with significance of pre-independence and post-independence developments;
- Explain the concept, objectives, importance and types of Evaluation and also adjustment in evaluation due to limitations of blindness and low vision.

Course Content

UNIT 1: Introduction to Environment Science (EVS) and Social Science

1.1 Environment Science (EVS) and Social Science-- Concept, Scope and Nature;

1.2 Understanding EVS as an integrated area of Science, Social Science and Environmental Education;

1.3 Environment Science as Science- Water, air, soil, source of energy, eco system, response and adaption in plants and animals;

1.4 Environment (EVS) as a Social Science- Difference between Social Science and Social Studies, Human Population and the environment, Agriculture and Industry, Environment Degradation and Concerns, Disaster Management;

1.5 Scope, nature and objectives of Teaching EVS and Social Science to children with visual impairment;

Unit 2: Educational Implications of Visual Impairment for Organization of the Classroom:

2.1 Educational implications of blindness and low vision for teaching EVS and Social Science;

2.2 Problems and limitations faced by learners with blindness and low vision in learning EVS and Social Science;

2.3 Adaptations, accommodation, and Modification in EVS and Social Science Curriculum for students with blindness and low vision;

2.4 Aids and equipment needed for providing non-visual experiences for visual ideas of EVS and Social Science concepts to children with blindness and low vision;

2.5 Qualities of a good EVS and Social Science Teacher;

Unit 3: Methods and Skills of Teaching Social Science:

3.1 An overview of methods of teaching: Source Method, Discovery Method, Project Method, Problem Solving Method, Play way Method, Field Study Method, Observation Method, Pendulum Method, Correlation Method and Discussion method;

3.2 Skills: Dramatization, Narration, Explanation, Story Telling, Role Play;

3.3 Importance of community resources and current affairs in EVS and Social Science;

3.4 Laboratory , Library, Museum and exhibition;

3.5 Unit Planning and Lesson Planning in EVS and Social Science with use of TLM;

Unit 4: History, Geography and Civics:

4.1 Rise of various dynasties through early and middle ages;

4.2 Establishment and expansion of the British Empire;

4.3 India's Freedom struggle from 1857 to 1947;

4.4 Concept of democracy and secularism with salient features of the Indian Constitution;

4.5 Understanding glob, earth, solar system and concept of day night and seasons;

Unit 5. Evaluation in EVS and Social Science:

5.1 Concept, objectives and significance of Evaluation;

5.2 Techniques of evaluation;

5.3 Formative, Summative and Continuous and Comprehensive Evaluation;

5.4 Adjustments in evaluation due to limitations of blindness;

5.5 Designing a teacher-made test in EVS and SS;

Suggested readings

Aggarwal, J. C. (2008). Principles, methods & techniques of teaching. UP: Vikas Publishing House Pvt Ltd.

Batra, P. (2010). Social Science Learning in Schools Perspective and Challenges, Sage Publications Pvt. Ltd; Pap/Com edition.

Bloom, J. W. (2006).Creating a classroom Community of young scientists.Newyork: Routledge

Dhand, H. (2009). Techniques of Teaching. New Delhi: APH Publishing Corporation.

Duplass, J. A. (2009). Teaching elementary social studies. New Delhi: Atlantic Publishers.

Harlen, W. &Elastgeest, J. (1992).UNESCO Source Book for Science in the Primary School. New Delhi: NBT

Kelly, P. Gale, G. (1998). Towards Excellence: Effective education for students with vision impairments. North Rocks: North Rocks Press

Kochar, S. K. (1984). Teaching of Social Studies. New Delhi: Sterling Publications

Mangal, S.K. (2004). Teaching of Social Science, Arya Book Depot, Delhi.

Mangal, U. (2005). SamajikShikshan, Arya Book Depot, New Delhi

NCERT (2006).Position Paper on Science Education. New Delhi: NCERT

NIVH (2015). Visual Disability: A Resource Book for Teachers. Dehradun: NIVH

Rai, B.C. (1999). Methods of Teaching Economics, Prakashan Kendra, Lucknow.

Scholl, G. T. (1986). Foundations of the Education for Blind and Visually Impaired children and Youth: Theory and Practice. New York: AFB

Sharma, R.A. (2008). Technological foundation of education. Meerut: R.Lall Books Depot.

Sharma, R.N. (2008). Principles and techniques of education. Delhi: Surjeet Publications.

Singh, Y.K. (2009). Teaching of history: Modern methods. New Delhi: APH Publishing Corporation.

PRACTICAL: Semester – I

BRAILLE I - STANDARD ENGLISH BRAILLE

Total Hours=75 **Total Credits=2.5** **Total Marks = 75**

Learning Outcome:

On the completion of this practical, the student teachers will be able to:

- Gain knowledge about the basics of Braille script;
- Use various signs used in English Braille and understand the use of Braille writing devices
- Develop skills in writing and reading English Braille Grade I& II
- Transcribe the printed text in to Braille;
- Prepare Braille Reading Readiness Kit;

Course Content

Unit 1: English Braille – Grade I

1.1 Seven-line system of Braille ;
1.1. English alphabets;
1.2. Different ways of embossing dot-combinations;
1.3. Various signs used in English Braille punctuation marks, Capitalization, italics, numeric, Numerals;
1.4. Practice on the use of Braille writing devices–Pocket Frames, Inter-Line Frames, Inter-Point Frames, Braillers;
1.5. Reading and writing English Braille– Grade I;

Unit 2: English Braille- Grade II

2.1 English contractions and abbreviation;
2.2 Writing poems ;
2.3 Reading and writing English Grade II Braille;

Unit 3: Transcribing of a 20-page English Book in to English Grade II Braille.

3.1 Preparation of reading readiness materials with the help of raised lines, raised dots and different way of embossing dot-combinations.
3.2 Creating 63 characters /image with the help of dot-combinations.

Practical Course

COURSE - II

ORIENTATION AND MOBILITY – I

Total Hours=75 **Total Credits=2.5** **Total Marks = 75**

Learning Outcome:

On the completion of this practical, the student teachers will be able to:

- Understand the need for training in other senses and Daily Living Skills for the orientation and mobility;
- Enhance skills under blindfolded conditions;
- Develop skills in sighted guide techniques;
- Gain knowledge about the need and significance of O&M for persons with Low Vision;
- Apply the skills learnt for teaching orientation and mobility for the students with visual impairment;

Course Content

Unit 1: Training Under Blind-fold Condition:

1.1. Auditory—Sound Localization, Discrimination, Masking Sound, Echo-Location and Sound Shadow;

1.2. Tactile Exploration of Surfaces;

1.3. Use of Kinesthesis;

1.4. Identification of clues and land marks in in-door and out-door environment and their use;

1.5. Training in Independent Living Skills (ILS) under Blindfold;

- Eating
- Dressing
- Hygiene
- Personal grooming
- House hold chores
- Infection prevention and control

Unit 2: Using Safety Techniques

2.1 Trailing;

2.2 Protective Techniques (Upper arm, Lower arm and both arms Techniques);

2.3 Squaring off;

2.4 Locating and picking dropped objects/articles;

Unit 3: Sighted Guide

3.1 Familiarization with the Technique;

3.2 Getting started;

3.3 Changing sides;

3.4 Walking through narrow spaces and door-ways ;

3.5 Ascending and descending stairs;

3.6 Getting into cars and public transport;

3.7 Negotiating various seating arrangements;

Unit 4: Orientation &Mobility for Low Vision

4.1 Encouraging optimum use of residual vision;

4.2 Negotiating doors, door-ways, stairs;

4.3 Independent outdoor travel with and without sighted guide;

Practical Course

COURSE - III

USE OF SPECIAL APPLIANCES - I

Total Hours=75 **Total Credits=2.5** **Total Marks = 75**

Learning Outcome

On the completion of this practical, the student teachers will be able to:

- Get awareness about the use of special appliances such as Abacus, Taylor Frame, Tactile Geometric Kit, embossed globe, tactile maps and charts
- Develop the skills to operate Abacus for basic mathematical calculations
- Enhance the necessary competencies to use the Taylor Frame for various mathematical exercises
- Get acquainted with the functioning of tactile geometry kit and its use for drawing tactile diagrams and figures and use of embossed globe, tactile maps and charts.
- Apply these skills in teaching mathematics, science and social science for students with visual impairment.

Course Content

Unit 1: Abacus

1.1 Exercises involving proper hand positioning in the Abacus;

1.2 Setting numbers Addition and Subtraction;

1.3 Multiplication and division;

Unit 2: Taylor Frame

2.1. Exercises involving directional concepts with the help of Taylor Frame;

2.2 Writing of numbers and digits;

2.3 Writing of various mathematical signs like plus, minus, multiplication, division etc.

2.4 Writing and doing various mathematical exercises–

- Addition
- Subtraction
- Multiplication
- Division

Unit 3: Tactile geometry kit and its use for drawing tactile diagrams and figures

Unit 4: Use of embossed globe, tactile maps and charts.

Practical Course

COURSE - IV

CLASSROOM OBSERVATION AND PREPARATION OF LESSON PLAN

Total Hours=75 **Total Credits=2.5** **Total Marks = 75**

Learning Outcome

On the completion of this practical, the student teachers will be able to:

- Observe the classes handled by the supervising teachers;
- Reflect on the teaching strategies used by the supervising teachers;
- Understand the need for preparing lesson plans before execution of teaching;
- Gain knowledge to prepare lesson plans using appropriate steps;
- Develop skills to prepare lesson plans;

Course Content

Each pupil-teacher will be required to observe 20 classes of various school subjects of supervising teachers/regular classroom teacher and prepare the lesson plans accordingly.

Practical Course

COURSE - V

TEACHING OF ORIENTATION & MOBILITY AND ACTIVITIES OF DAILY LIVING TO CHILDREN WITH LOW VISION

Total Hours=75 **Total Credits=2.5** **Total Marks = 75**

Learning Outcome

On the completion of this practical, student teachers will be able to

- Identify students with low vision using various identification tools;
- get practical training about various age-appropriate Orientation & Mobility to children with Low Vision;
- get practical training about age-appropriate activities of daily living to children with Low Vision;

Course Content

Unit -1 Prepare a checklist for identification of children with Low vision.

1.1 Identify a Child with low vision and assess Pinhole acuity.

1.2 Identify contrast sensitivity of a child with low vision to detect differences in grayness and between objects and their background. (Contrast sensitivity: a procedure in which luminance of standardized target is compared with its surroundings. Pelli Robson chart can be used)

1.3 Prepare an action plan for providing training of the component of Expanded Core Curriculum to children with low vision.

Unit – 2 Teaching age-appropriate Orientation & Mobility skills to children with Low Vision

2.1 Perform activities for Encouraging optimum use of residual vision

2.2 Negotiating doors, door- ways, stairs, Independent outdoor travel with and without human guide

2.3 Preparing tactile/auditory maps for Children with low vision: Each student-teacher will be required to prepare 2 tactile/audio maps.

Unit – 3 Age-appropriate activities of daily living to children with Low Vision

3.1 Provide training of activities of 3 simple house hold works to children with low vision.

3.2 Provide training of activities of self-health care and hygiene to children with low vision.

3.3 Provide training of activities of currency identification to children with low vision.

17.2 Semester 2

COURSE IV

CHILD DEVELOPMENT AND LEARNING

Total Hours = 75 Total Credits= 2.5 Total Marks= 75 (Internal 30, External 45)

Learning outcomes

On the completion of this course, the student-teachers will be able to:

- Describe the developmental milestones and identify variations among children.
- Explain the process of development in infancy and childhood.
- Apply the knowledge of theories and factors affecting learning.
- Transfer the knowledge of psychological processes in class while working with a child with special needs.
- Demonstrate skills of classroom managing skills and behavior problems.

Unit 1: Growth and Development

1.1 Definition and meaning of growth and development

1.2 Principles and factors affecting development

1.3 Nature vs. Nurture

1.4 Domains of development; Physical, social, emotional, cognitive, moral and language

1.5 Developmental milestones and identifying deviations and giftedness

Unit 2: Ages and stages of development (Birth to Childhood)

2.1 Prenatal (conception to birth)

2.2 Infancy (Birth to 2 year)

2.3 Toddler (2 to 4 years)

2.4 Early childhood (Up to 7 years)

2.5 Late childhood (7 to 14 years)

Unit 3: Psychology and Learning

3.1 Educational Psychology; relevance and scope for educators

3.2 Basic principles of learning given by Thorndike, Pavlov, Skinner, Bandura, Piaget and Vygotsky

3.3 Learning styles and types of learners

3.4 Socio-cultural factors affecting learning

3.5 Implications for children with special needs

Unit 4: Psychological processes and their Implications for Children with different Disabilities

4.1 Attention; concept and factors affecting attention in classroom

4.2 Perception; concept and factors affecting perception

4.3 Memory; types and strategies to enhance memory of children

4.4 Intelligence; definition, meaning and significance of IQ, Gardner's theory of Multiple Intelligences

4.5 Motivation intrinsic, extrinsic, factors affecting motivation

Unit 5: Classroom Management

5.1 Stimulating learning environment; physical and emotional

5.2 Common behaviour problems in children

5.3 Functional analysis of behaviour

5.4 Behaviour management techniques: Cognitive and behavioural

5.5 Modifying behaviours of children with special needs in inclusive and special classroom

Suggested readings:

Bhan S. (2014) Understanding Learners, A Handbook for Teachers, publishers; Prasad Publications, N. Delhi, ISBN 978-93-84764-01-2

Freeman, J., (1985). The psychology of gifted children: Perspectives on development and education. John Wiley & sons, New York.

Panda, KC (2001) Elements of Child Development (Sixth Revised Edition), Ludhiana Kalyanam Publishers.

Sharma, P (1995) Basics on Kaul, V (1993) Early Childhood Education Programme, New Delhi,NCERT

Madhavan, T. Kalyan, M. Naidu, S. Peshawaria, R and Narayan, J (1989) Mental Retardation – A Manual for Psychologists,

Muralidharan R (1990) Early Stimulation Activities for Young Children, New Delhi NCERT Development and Growth of a Child. New Delhi: Reliance Publishing House.

Sharma, R and Sharma, R (2002) Child Psychology Atlantic: New Delhi.

Mohan Mathew (1972) Child Psychology in Indian Perspective

Jan Borms (1984) Human Growth and Development

Wallace, P.M. and Goldstein, J.M. (1944) An Introduction to Psychology (3rd Edition) Madison: Brown and Benchmark Publishing

Lindgren H (1988) Educational Psychology in the Classroom, Harper andRaw

Panda,KC(1997) Education and Exceptional Children, Vikas Publishing House, New Delhi

Arthur E. Dell Orto, Paul W. Power (2007) The Psychological and Social Impact of Illness and Disability

Vicki L. Schwean, Donald H. Saklofske (1999) Handbook of Psychosocial Characteristics of ExceptionalChildren

COURSE V

EDUCATION OF CHILDREN WITH LOW VISION.

Total Hours = 75 Total Credits= 2.5 Total Marks= 75 (Internal 30, External 45)

Learning Outcomes:

On the completion of this Course, the pupil-teachers will be able to:

- Acquire understanding of low vision conditions and its associated implications in educational context;
- Understand and use classroom and related strategies to cater the specific needs of students with low vision;
- Acquire knowledge and skills related with low vision devices and adaptations;
- Describe the need and importance of environmental modifications to meet the educational need of children with low vision;
- Acquire and use skills of functional assessment and to organize vision training activities;

Course Content

Unit 1: Understanding Low vision

1.1. Understanding Vision & Visual Deficits (Visual Acuity, Visual Field) & Legal Definitions;
1.2. Diseases and Conditions causing Low Vision;
1.3. Psychological Implications of Low Vision in Children;
1.4. Educational Implications of Low Vision in Children;
1.5. Early Identification & Intervention ;

Unit 2: Functional Vision & Vision Training

2.1. Visual Skills & Functional Vision;
2.2. Carrying out Functional Vision Assessment;
2.3 Visual Stimulation: Concept and Method;
2.4 Concept & Procedure for increasing Visual Efficiency;
2.5. Factors affecting Visual Efficiency Training Programme;

Unit 3: Aids & Adaptations

3.1. Magnification: Concept & Limitations;
3.2. Optical Devices: Selection and Use;
3.3. Computer and Mobile based Magnification Solutions;

3.4. Non-Optical Devices;

3.5. Adaptation & Environmental Modifications (Contrast, Illumination, Large Print, etc.);

Unit 4: Classroom related Strategies

4.1. Classroom Management & Curricular Adaptation for Children with Low Vision;

4.2. Appropriate Medium of Reading and Writing and Improving Reading and Writing Skills;

4.3. Strategies for better Peer Group Cohesion & Cooperative Learning;

4.4. Applying UDL & Appropriate Strategies for Classroom Assessment;

4.5. Addressing the needs of Students with Low Vision with Additional Disabilities;

Unit 5: Participation & Community Intervention

5.1. Addressing identity Issues in Children with Low Vision;

5.2. Independent Living Skill (including Orientation and mobility);

5.3. Recreational & Sports Activities;

5.4 Schemes & Benefits for Persons with Low Vision and their families/community;

5.5. Environmental Modifications at Home & Public Places;

Suggested Readings

Barraga, N.C. (1976). Visual handicaps and learning. Belmont, CA :Wadasworth Publishing Co., Inc.

Fernandez, G., Koenig, C., Mani M.N.G., and Tesni, S. (1999). See with the Blind. Bangalore: Books for Change and CBM International.

Jangira, N. K. Mukhopadhyay, M., Mani M.N.G., and Roychoudaary. Source Book for Teaching of Visually Disabled Children. New Delhi: NCERT, 1988.

Corn and Erin (2010). *Foundations of Low Vision: Clinical and Functional Perspectives.* New York: American Foundation for the Blind

Julka, A. (2000). Low Vision Children: A Guide for Primary School Teachers. NCERT, New Delhi – 1999. Both in English (1999) and Hindi (2001).

Keffe, J. (). Assessment of Low Vision in Developing Countries: Book 2. Assessment of Functional Vision. Geneva: World Health Organization

Mani, M. N. G., (2001). Reading Preference Test (REPT) for Children with Low Vision. Coimbatore: International Human Resource Development Centre for the Disabled.

Jose, Randall T (1983). Understanding the Low Vision. New York: American Foundation for the Blind.

Warren, D.H. (1977). Blindness and early childhood development. New York: American Foundation for the Blind.

World Health Organization (1993). Management of Low Vision in Children. Geneva

D'Andrea, F. M. (2000). Looking to Learn: Promoting Literacy for Students with Low Vision. American Foundation for the Blind.

Levack, Stone & Bishop (1994). Low Vision: A Resource Guide with Adaptations for Students with Visual Impairments. Texas School for the Blind and Visually Impaired (TSBVI).

Blasch, B. B. (2010). *Foundations of Orientation and Mobility*. American Foundation for the Blind.

Chaudhry, M. (2010). Low Vision Aids. New Delhi: Jaypee Brothers Medical Publishers Private Limited

COURSE VI

PEDAGOGY OF HINDI/STATE LANGUAGE AND ENGLISH EDUCATION

Total Hours = 75 Total Credits= 2.5 Total Marks= 75 (Internal 30, External 45)

Part A: Hindi/State Language हिंदी शिक्षण

Note: Training institutes situated in non-Hindi region may develop their syllabi of Pedagogy of State Language on their own.

पाठ्यक्रम के उद्देश्य : प्रस्तुत पाठ्यक्रम द्वारा विद्यार्थियों इस योग्य होंगे कि -

- **प्राथमिक स्तर पर हिंदी शिक्षण के उद्देश्य एवं महत्व को बता सकेंगे;**
- **हिंदी शिक्षण के विभिन्न विधियों की चर्चा कर सकेँगे;**
- **हिंदी में सुनने, बोलने, पढ़ने एवं लिखने के कौशलोंको अधिग्रहण कर सकेंगे;**
- **हिदी की विभिन्न विधायोंकी शिक्षण विधियों को समझा सकेंगे;**
- **हिंदीमें मूल्यांकन कर सकेंगें|;**

Course Content

इकाई-1: हिंदी भाषा का स्थान एवं महत्व

1.1 भाषाकी परिभाषा एवं महत्व

1.2 हिंदी भाषा के विविधरूप: मातृभाषा, प्रादेशिक अथवा क्षेत्रीय भाषा, राजभाषा, राष्ट्रभाषा एवं सम्पर्क भाषा

1.3 हिंदी भाषा का विद्यालयी पाठचर्या में स्थान

1.4 हिंदी भाषा काविद्यालयीपाठचर्यामेंमहत्व

1.5 हिंदी भाषा शिक्षण के सामान्य सिद्धांत: स्वभाविकता, प्रयत्न, रूचि, क्रियाशीलता, प्रेरणा, अनुकरण, वैयक्तिक विभिन्नता, एवं अभ्यास का सिद्धांत

इकाई-2: प्राथमिक स्तर पर हिंदी शिक्षण के उद्देश्य एवं विधियाँ

2.1 हिंदी शिक्षण के सामान्य उद्देश्य

2.2 हिंदी शिक्षण के विशिष्ट उद्देश्य: ज्ञानात्मक, कौशलात्मक, रसात्मक एवं समीक्षात्मक

2.3 हिंदी शिक्षण की विधियाँ: कहानी कथन विधि, पाठ्यपुस्तक विधि, व्याख्या विधि, हरबार्तिय विधि एवं

2.4 भाषा प्रयोगशाला विधि; इनके गुण एवं अवगुण

2.5 हिंदी शिक्षण की नवीन विधियां: निदानात्मक एवं उपचारात्मक शिक्षण

इकाई-3: हिन्दी की विविध विधाओंके शिक्षण की विधियों का परिचय और उपयोग

3.1 गद्य शिक्षण: अर्थबोध, व्याख्या, विश्लेषण और संयुक्त विधि का परिचय

3.2 पद्य शिक्षण: शब्दार्थ कथन, खण्डान्वय, व्यास और समीक्षा विधि का परिचय

3.3 नाटक शिक्षण

3.4 व्याकरण शिक्षण

3.5 उच्चारण शिक्षण

इकाई-4: हिंदी भाषा के विभिन्न कौशल एवं श्रव्यदृश्य उपकरण

4.1 श्रवण कौशल

4.2 पठन कौशल

4.3 लेखन कौशल

4.4 उच्चारण कौशल

4.5 हिंदी शिक्षण में श्रव्यदृश्य उपकरणों का उपयुक्त चयन

इकाई-5: पाठ नियोजन एवं मूल्यांकन

5.1 पाठ नियोजन का परिचय, उपयोग एवं महत्व

5.2 पाठ नियोजन के विविध उपागम

5.3 पाठ योजना का प्रारूप, गुण एवं दोष

5.4 पाठ योजना के चरण और उनका क्रियान्वयन।

5.5 हिंदी में मूल्यांकन की प्रमुख प्रविधियां

सन्दर्भ पुस्तकें -

1. **हिन्दी शिक्षण: अभिनव आयाम, डा. श्रुतिकान्त पाण्डेय, एक्सिस पब्लिकेषंस, दरियागंज, नई दिल्ली, 2010.**
2. **हिन्दी शिक्षण, उमामंगल, आर्य बुक डिपो करोल बाग, नई दिल्ली, 2005.**
3. **हिन्दी शिक्षण, डा. रामशकल पाण्डेय, विनोद पुस्तक मन्दिर, आगरा, 2005.**
4. **हिन्दी साहित्य का इतिहास, आचार्य रामचन्द्र षुक्ल, राजकमल प्रकाशन, नई दिल्ली, 2006**
5. **हिन्दी शिक्षण, रमन बिहारीलाल, रस्तोगी प्रकाशन, मेरठ, 2002.**
6. **हिन्दी शिक्षण, सावित्री सिंह, इन्टरनेशनल पब्लिषिंग हाउस, मेरठ, 2004.**
7. **हिंदी शिक्षण, डा. कर्णसिंह, गोविन्द प्रकाशन, लखीमपुर खीरी, 2012.**

8. माध्यमिक विद्यालयों में हिन्दी शिक्षण, निरजंन कुमार सिंह, राजस्थान हिंदी आकादमी, जयपुर, 2010.

Part B: English

Learning outcomes:

On the completion of this Course, the pupil-teachers will be able to:

- Define the objectives of teaching English at the elementary level, consistent with its place in society;
- Make use of appropriate methods of teaching English;
- Acquire efficient skills of listening, speaking, reading and writing English;
- Enrich their knowledge of grammar and lexical items and teach them efficiently in the classroom;
- Carry out evaluation properly;

Course Content

Unit 1: Role of English Language in Curriculum and Life & Grammar

1.1 Importance of English Language in a multilingual society;

1.2 Objectives of teaching English as second/third language at elementary level;

1.3 Word formation/spelling; Parts of speech; Kinds of sentences;

1.4 Transformation of sentences – tenses, clauses and connectors, non-finites, voices;

1.5 Methods of teaching grammar – inductive and deductive methods;

Unit 2: Methods of Teaching English

2.1. Translation method – Importance, merits and demerits;

2.2 Auro-Oral Approach-- Importance, merits and demerits;

2.3 Structural Approach -- Principles of Structural Approach, merits and demerits; Skill based Approach – Listening, speaking, reading, writing;

2.4 Direct method – Aims, merits and demerits; Eclectic method – Importance, merits and demerits;

2.5 Communicative Approach – Importance, merits and demerits;

Unit 3: Listening and Speaking

3.1 Listening with comprehension to follow simple instructions, public announcements, telephonic conversation, radio, television news, sports commentary, classroom discussion;

3.2 Organs of speech, the classification and description of speech sounds: consonants, vowels;

3.3 Word stress and sentence stress; Intonation, accents and rhythm in connected speech;

3.4 Use dictionary for correct pronunciation and stress;

3.5 Organizing listening and speaking activities – rhymes, songs, stories, poems, role play, dramatization, language games etc.;

Unit 4: Reading & Writing

4.1 Reading Readiness/creating environment for reading;

4.2 Methods of teaching reading-- the phonic method, the sentence method, and story method

4.3 Reading efficiency – reading aloud, silent reading, reading with speed;

4.4 Reading with comprehension -- textbooks, story books, fiction, poetry, articles and Internet; Using reading as a tool for reference – use of Dictionary, Encyclopaedia and Internet;

4.5 Prewriting skills and writing readiness; Mechanics of writing and punctuations; Different forms of writing – letters (application, complaint, permission, invitation), messages, notices and posters;

Unit 5: Evaluation

5.1 Objectives of evaluation;

5.2 Tools of evaluation;

5.3 Types of evaluation – formative, summative, continuous and competency-based;

5.4 Construction of test items for evaluating language problems of children;

5.5 Designing remedial teaching;

Suggested Readings

Baruah, T C, The English Teachers Hand Book (2006), Sterling Publishers Private Limited: New Delhi

Paul Varghese, C., Teaching English as a Second Language (1989), Sterling Publishers Private Limited: New Delhi

Prem Shankar, Teaching of English (2004), APH Publishing Corporation: New Delhi

Singh, Y K, Teaching of English (2005), APH Publishing Corporation: New Delhi.

Practical Course

COURSE VI

BRAILLE - HINDI/STATE LANGUAGE

Total Hours=75 **Total Credits=2.5** **Total Marks = 75**

Learning Outcome:

On the completion of this practical, the student teachers will be able to:

- Develop reading skills in Hindi/State language Braille;
- Develop writing skills in Hindi/State language Braille;
- Prepare Braille Calendar ;
- Type paragraphs, poems etc. in Hindi/State language Braille;

Transcribe the Hindi/State language content into Braille (Concerned language);

Course Content

Unit 1: Hindi/State language – Reading and Writing

1.1 Alphabets;
1.2 Reading Words
1.3 Writing Words–Use of writing Frames and Braillers
1.4 Reading and Writing Passages

Unit 2: Preparing Braille Calendar

Unit 3: Hindi/State language- Braille Formats

3.1 Paragraphs;
3.2 Poems;
3.3 Poetry in prose format;
3.4 Poetry in verse format;
3.5 Making a mark sheet;

Unit 4: Transcribing a 20-Page Hindi/State Language Book in to Braille

Practical Course

COURSE VII

ORIENTATION AND MOBILITY-II

Total Hours=75 **Total Credits=2.5** **Total Marks = 75**

Learning Outcome:

On the completion of this practical Course, the student teachers will be able to:

- Use the basic cane techniques;
- Acquire skills in other cane techniques such as two & three point touch, trailing, ascending and descending stairs etc.,
- Use cane with sighted guide;
- Develop competency to prepare tactile/auditory maps for blind and children with low vision;
- Apply the cane skills in indoor and outdoor traveling;

Course Content

Unit 1: Use of cane techniques – Grip, Rhythm, Swing, Gait, Arc, Taking Direction using Cane

Unit 2:

2.1 Two-point touch technique;

2.2 Three-point touch technique;

2.3 Trailing, Shoreline-- both inside and outside the campus;

2.4 Ascending and descending stairs with cane;

Unit 3: Using cane with sighted guide

Unit 4: Preparing tactile/auditory maps for blind and children with low vision

Unit 5: Indoor and outdoor travel with long/folding/smart canes with use of Residual vision

Practical Course

COURSE - VIII

LEARNING ENVIRONMENT AND SENSITIVITY FOR CHILDREN WITH LOW VISION

Total Hours=75 **Total Credits=2.5** **Total Marks = 75**

Learning Outcome:

On the completion of this practical Course, the student teachers will be able to:

- get practical exposure about various techniques for sound identification;
- get practical training about light sensitivity of children with Low Vision;
- get practical training about IEP to children with Low Vision and will be able to suggest various suitable recommendations mean modifications;
- Plan an IFSP for a child with vision impairment and additional disability;

Course Content

1. Students will be required to provide training to Low vision children under Blind-fold Condition for Sound Localization, Discrimination, Masking Sound, Echo-Location and Sound Shadow, Tactile Exploration and Use of Kinesthesis sense.
2. Provide experiences to children with low vision for light sensitivity or response to light (sunlight or artificial light).
3. Prepare an IEP based on the information gathered through these various activities, the pupil teacher should suggest recommendations about ways to help your child learn to use his vision more effectively. Recommendations mean modifications or changes to the environment, such as providing additional lighting for certain tasks or seating your child with the glare from the window behind, use of a black marker to increase the contrast between the letters and the paper being used when he writes, or additional time for completing a test.
4. Develop an individualized family service plan (IFSP) for a child with vision impairment and additional disability

Practical Course

COURSE - IX

PREPARATION OF LOW COST TEACHING LEARNING MATERIAL

Total Hours=75 **Total Credits=2.5** **Total Marks = 75**

Learning Outcome:

On the completion of this practical Course, the student teachers will be able to:

- Acquire knowledge about the principles of preparing Teaching Learning Material for students with total blindness and low vision;
- Develop skills to utilize the no cost & and low cost materials that are available in the immediate environment;
- Enhance competency to prepare large print material for the low vision;
- Construct 2D diagrams of 3D models required to teach mathematics, science and social science;
- Apply the knowledge and competencies in the preparation of TLM in actual class room teaching;

Course Content

Each teacher-trainee will be required to prepare at least two low cost / no cost teaching-learning material for totally blind and two for children with low vision (Large print material) in the concerned subjects and present the same for evaluation along with one 3 Dimensional model.

Practical Course

COURSE X

PRACTICE TEACHING – I

Total Hours=75 **Total Credits=2.5** **Total Marks = 75**

Learning Outcome:

On the completion of this practical, the student teachers will be able to:

- Understand the need for preparing lesson plans before execution of teaching;
- Demonstrate various teaching skills that are required to teach children with visual impairment;
- Identify the need for teaching the expanded core curricular activities;
- Use the necessary TLM and adaptations wherever required;
- Reflect on his/her own way of teaching methods including evaluation practices;

Course Content

Each pupil-teacher will be required to plan and deliver 10 lessons in the concerned school subject and 10 lessons in Expanded Core Curriculum keeping in view the needs of children with low vision, as appropriate.

17.3 Semester – III

COURSE - VII

EDUCATION IN EMERGING INDIAN SOCIETY AND SCHOOL ADMINISTRATION

Total Hours = 75 **Total Credits= 2.5** **Total Marks= 75 (Internal 30, External 45)**

Learning outcomes

On the completion of this Course, the student-teacher will be able to:

- Define Education, describe functions of education and aims of education;
- Describe relationship between Education and Philosophy;
- Appreciate the role of various agencies in educational development of children—both non-disabled and disabled;
- Understand various education commissions and policies of Education;
- Describe the importance of School Administration and documentation;

Course Content

Unit 1: Nature of Education:

1.1. Meaning and definition of education;

1.2. Aims of Education: character building, education as means of livelihood, for social efficiency social aim, cultural development and transmission;

1.3. Education in 21st century in India;

1.4. Formal, Informal and Non-Formal Education;

1.5. Functions of Education—Nation Building, National Integration, Social Integration Bringing about peace and harmony in the society and inculcating values and ethos;

Unit 2: Philosophical Foundations of Education

2.1. Meaning and definition of philosophy, Relationship of philosophy with educational practices;

2.2. Different Educational philosophies—Idealism, Naturalism Pragmatism and Humanism—an overview;

2.3. Prominent Educational Philosophers— John Dewey, Kilpatrick, Rousseau, —their principles and aims of education;

2.4. Indian Educational Philosophers— Gandhi, Aurobindo, Rabindra Nath Tagore and Vivekanand—their principles and aims of education;

2.5. Teacher and the learner: ancient ideals of a teacher, teacher in modern education; roles, functions and traits of a teacher;

Unit 3: Agencies of Education

3.1. Different agencies of education: Formal, Informal and Non-formal;

3.2. Modes of Education: Regular, Open, Distance & Online, Blended learning;

3.3. Regular School, Inclusive School and Special School, Home Education, Home-based Program, Family Community and Mass Media;

3.4. Roles of Governmental Organizations—NCERT, SCERT, NCTE, UGC, Ministry of Education;

3.5. Roles of various national and international Non-Governmental Organizations (NGOs) in promoting of educational opportunities for children with disabilities;

Unit 4: Educational Provisions in India

4.1. Indian constitutional and education: Directive Principles, Fundamental Rights and Duties, Constitutional Provisions on Education;

4.2. Acts and Provisions: Free and compulsory education as fundamental rights (article 21A of 2002) and RTE Act 2009 and Amendments; Educational provisions enshrined in RPWD Act, 2016;

4.3. Various Education Commissions since Independence: The University Education Commission (1948-49), the Secondary Education Commission 1952 -53, Kothari Commission report 1964- 66;

4.4. National Education Policy 1986, Plan of Action 1992 and National Education Policy 2020;

4.5. Equality of opportunity in educational institution and inclusive education at different levels: elementary, secondary and higher education;

Unit 5: School Administration:

5.1. Meaning, definition and principles of School Administration and School Organization;

5.2. Organization of Special School and Inclusive School;

5.3. Code and conduct of teacher, duties and responsibilities of the head of school;

5.4. Annual school plan and Preparation of time-table, Continuous and Comprehensive Evaluation (CCE);

5.5. Maintenance of school-record--progress report, cumulative record, case histories;

Suggested Readings:

Bhatia K. and Bhatia B.D. (1994).Theory and Principles of Education.Doaba House

Chandra, S.S. (2003) Indian Education Development, Problems, Issues and Trends, Meerut: R. Lall Book Depot.

Dash B. N. (1993). Teacher and Education in the Emerging Indian Society, Dominant Publishers and Distributors

Dash, M & Dash, N. (2017).School Management. New Delhi. Atlantic Publishers and Distributors Pvt Ltd; 1st edition.

Ghosh, Sunanda & Mohan, Radha (2015). Education in Emerging Indian Society: The Challenges and Issues. New Delhi, PHI Learning Private Limited.

Kochhar S.K. (2011). School Administration and Management. New Delhi, Sterling Publications Pvt Ltd,

NCERT. Teacher and Education in Emerging Indian Society

Pearson series in Education (2012).Teacher in Emerging Indian Society. New Delhi, Pearson Education India.

R.P. Pathak (2013). BhartiyaSamaj men Shiksha. New Delhi, Pearson Education India.

Samuel, R. S. (2015). Education in Emerging India.New Delhi, PHI Learning Private Limited.

Saxena, N.R.S., Gupta, M. (2020). Philosophical Foundations of Education, R. Lall Publishers

Taneja. V. R (1990). Educational Thoughts and Practices. Sterling Publishers, New Delhi

COURSE - VIII

TEACHING OF EXPANDED CORE CURRICULUM TO CHILDREN WITH BLINDNESS AND LOW VISION

Total Hours = 75 Total Credits= 2.5 Total Marks= 75 (Internal 30, External 45)

Learning Outcomes

On the completion of this Course, the pupil-teachers will be able to:

- Describe the concept and importance of expanded core curriculum for children with blindness and low vision;
- Acquire and use information about the methods of teaching Braille to children with blindness and low vision;
- Demonstrate the procedures, principles and methods of sensory training;
- Acquire necessary skills and competencies for imparting training in orientation and mobility and daily living skills to the children with blindness and low vision;
- Demonstrate an ability to use various assistive devices for the children with blindness and low vision;

Course Content

Unit 1: Expanded Core Curriculum & Concept Formation:

1.1 Need, importance and Concept of expanded core curriculum;

1.2 Difference between Expanded Core Curriculum and Plus Curriculum;

1.3 Meaning, definition and stages of concept formation;

1.4 Implications of loss of vision in concept formation;

1.5 Strategies for development of concepts amongst children with blindness and low vision;

Unit 2: Teaching of Braille

2.1 Pre-requisite skills for Braille reading;

2.2 Braille reading readiness;

2.3 Methods of teaching Braille reading;

2.4 Introduction of Braille writing and Braille writing devices;

2.5 Techniques of rapid reading and note taking skills;

Unit 3: Sensory Training:

3.1 Meaning and Importance;

3.2 Tactile and Auditory discrimination;

3.3 Olfactory, Gustatory and Kinesthetic discrimination;

3.4 Visual discrimination (use of residual vision);

3.5 Sensory integration;

Unit 4: Teaching of Orientation and Mobility:

4.1. Definition and importance;

4.2. Techniques of teaching orientation;

4.3. Techniques of teaching indoor and outdoor mobility – sighted guide, pre-cane, cane techniques, protective technique;

4.4. Significance and use of clues and landmarks;

4.5 Tactile and auditory maps and Echo-location;

Unit 5: Teaching of Daily Living Activities, Social Skills and Assistive Devices

5.1. Meaning, importance and age-appropriate classification of daily living skills;

5.2. Techniques of teaching daily living skills;

5.3. Personal hygiene, grooming, social etiquette and performing household tasks (cooking, cleaning, washing etc.);

5.4. Meaning, Need and Importance of Assistive Technology;

5.5. Use of Taylor Frame, Abacus and Geometry Devices;

5.6. Low cost/No cost teaching-learning material, tactile maps, diagrams and three-dimensional models;

Suggested Readings

American Foundation for the Blind: The Expanded Core Curriculum for Blind and Visually Impaired Children and Youths afb.org

Carol B. A. & Sandra L. (2017) ECC Essentials: Teaching the Expanded Core Curriculum to Students with Visual Impairments. American Foundation for the Blind, USA.

Developing the Best Education for Your Child. Perkins School for the Blind. https://www.perkins.org/school/ecc

Expanded Core Curriculum and students with visual impairment: Paths to literacy.

Gonzalez-Mena, J. (2011). Foundations of early childhood education: Teaching children in a diverse setting. New York: McGraw-Hill.

Hatlen, P. (2000). Historical perspectives. (Eds.), Foundations of education: Vol. 1. History and theory of teaching children and youths with visual impairments (2nd ed.). New York: AFB Press.

Jonathan J. and Wolffsohn, J. S. (2007).Low vision manual. Butterworth-Heinemann, UK.

Kundu, C.L (ed.) (2003), Disability Status India, Rehabilitation Council of India: New Delhi

Mani, M.N.G (1992). Techniques of Teaching Blind Children. New Delhi: Sterling Publishers.

Pandey, R.S. and Advani, Lal (1995) Perspectives in Disability and Rehabilitation.VikasPublishing House: New Delhi

Punani, B., and Rawal, N. (1993). Handbook: Visual Impairment. New Delhi: Ashish Publishing House.

Radha Bai. Et al. (Ed.) (1995). All Colors are there. Trichy: Holy Cross Service Society.

Texas School for the Blind: What is the Expanded Core Curriculum? https://www.tsbvi.org

COURSE IX

PEDAGOGY OF SCIENCE EDUCATION

Total Hours = 75 Total Credits= 2.5 Total Marks= 75 (Internal 30, External 45)

Learning Outcome:

On the completion of this Course, the students-teachers will be able to:

- Explain the concept and Values of Science and its objectives;
- Demonstrate knowledge about implications of visual impairment in teaching science concepts to children with Blindness and Low vision;
- Describe various methods of teaching Science to children with Blindness and Low vision;
- Explain the concept of Food Materials, Moving things and Natural Phenomenon ;
- Describe the need and approaches of curriculum adaptations in science curriculum for learners with Blindness and Low vision;
- Explain the concept, objectives, importance and types of Evaluation and also adjustment in evaluation due to limitations of blindness;

Course Content

Unit 1: Understanding Science:

1.1 Concept, Scope and Nature of Science;

1.2 Importance of Science in day to day life;

1.3 Aims and objectives of Teaching Science to children with Blindness and Low vision;

1.4 Scientific Enquiry in different domain of knowledge;

1.5 Values of Science- Social, Cultural, Ethical, Vocational, Utilitarian;

Unit 2: Transactions of Science Instructions to Blindness and Low Vision

2.1 Problems of Learning/ teaching Science to children with Blindness and Low Vision ;

2.2 Non-visual learning experiences, Specific teaching aids and equipment used in teaching of Science such as Thermometer, Plants, Animal Models, Tactile Charts and Diagrams;

2.3 Adaptations and modifications in Science Curriculum for children with Blindness and Low vision;

2.4 Preparation of teaching learning material for the use of Children's with Blindness and Low vision for learning science concepts;

2.5 Qualities of a good Science Teacher;

Unit 3: Methods of Teaching Science at Elementary Stage:

3.1 An overview of methods of teaching: Discovery Method, Project Method, Problem Solving Method, Inductive-deductive and Constructive Method, Field Trip Method-Visit to Science Museum and Exhibition, Observation Method, Correlation Method and discussion method;

3.2 Setting up a Science Lab and collaboration in Inclusive schools;

3.3 Determining the nature of Practical Work and apparatus requirements for the class consisting of learners with Blindness and Low vision;

3.4 Science Museum and exhibition;

3.5 Problems, Procedure, Approaches, and factors affecting curriculum development in Science for learners with Blindness and Low vision;

Unit 4: Food Materials, Moving things and Natural Phenomenon

4.1 Sources of food, components of food, food processing, crop production and microorganism;

4.2 Material: Clothes (Cotton, Jute, Silk, Wool), Metal and Non-metal properties;

4.3 Living and Non-living things, habitat plants;

4.4 Motion, Measurement, force, friction, Pressure, gravity, Magnets and Sound and Light;

4.5 Bio Diversity, wild life, pollution prevention, floral fauna, soil Climate change and formation of day and night;

Unit 5 Evaluation in Science

5.1 Concept, objectives and significance of Evaluation in Science;

5.2 Construction of Test Items for evaluating learning of Science by Pupils including pupils with Blindness and Low vision;

5.3 Formative, Summative and Comprehensive and Continuous Evaluation (CCE);

5.4 Adjustments in evaluation due to limitations of blindness;

5.5 Stating learning outcomes in Science and Diagnostic Testing with Remediation;

Suggested Readings

Bloom J. W. (2006). Creating a classroom community of young Scientists. New York: Rutledge

Brown, R. (1978). Science instruction of visually Impaired Youth. New York: AFB.

Das, R. C. (1985). Science Teaching in Schools. New Delhi: Sterling Publications

Gupta, S. K. (1983). Technology of Science Education, Delhi: Vikas Publishing House Pvt. Ltd.

Gupta, V. K. (1995). Teaching and Learning of Science and Technology. New Delhi: Vikas Publishing House Pvt. Ltd.

Harlen, W. (2006). Teaching, Learning and Assessing Science 5-12, London: Sage

Joshi, S. R. (2005). Teaching of Science. New Delhi: APH Publishing Corporation.

Mani, M. N. G. (1992). Techniques of teaching blind children, New Delhi: Sterling Publishers.

Martin, D. J. (2009). Elementary Science Methods-A Constructivist Approach,

Mukhopadhyay, S., Jangira, N. K., Mani, M.N. G., &Raychowdhary, N. (1987). Sourcebook for training teachers of visually impaired, New Delhi: NCERT.

NCERT (1982). Teaching Science in secondary schools, New Delhi: NCERT.

NCERT (2006).Position Paper on Science Education. Delhi: NCERT

NIVH (1992).Handbook for the teachers of the Visually Handicapped. Dehradun: NIVH

Rao, V.K. (2004). Science Education, APH Publishing Corpn. New Delhi.

Rap, V. K. (2004).Science Education. New Delhi: APH Publishing Corporation

Sharma, R.C. & Shukla, C.S. (2002).Modern Science Teaching. New Delhi: Dhanpad Raj Publishing Company Ltd.

Siddiqui, M. H. (2005). Teaching of Science. New Delhi: APH Publishing Corporation

Siddiqui, N.N., &Siddiqui, M. N. (1994). Teaching of science today & tomorrow, Delhi: Doaba House.

Practical Course

COURSE XI

BRAILLE - III

Total Hours=75 **Total Credits=2.5** **Total Marks = 75**

Learning Outcomes

On the completion of this practical, the student teachers will be able to:

- Get acquainted with mathematical Braille codes;
- Develop the competency to identify the mathematical Braille codes;
- Enhance their skills to interpret the mathematical Braille codes;
- Understand the format of different types of letters;

Gain knowledge related to the use of Thermoform machine/other duplicating devices such as Braille embossers;

Course Content

Unit 1: Mathematical Braille:

1.1 Writing Numerals,

1.2 Numeric Indicator, Math, Comma, Decimal Point, Punctuation Indicator;

1.4 Signs of operation(+,-,X,);

1.5 Brackets (Round, Curly, Square);

1.6 Fractions-(i)Simple fraction;
(ii)Mixed fraction;

1.7 Units of Currency Measurements

1.8 Roman Numerals;

1.9 Omission and Cancellation;

1.10 ShapeSigns–BasicShapes(Angle,Triangle,Circle,Square,Rectangle,Quadrilateral,Rumbas);

1.11 Run over Indicator;

1.12 Dash and Ellipsis;

1.13 Recurring Indicator;

1.14 Miscellaneous-(At Check Mark, Ditto Mark, Percentage, Ratio of proportion, since, therefore)

Unit 2: Letters Format of different types of letters

Unit 3: Use of Thermo form machine/other duplicating devices, Braille embosser including Braille Translation software

Practical Course

COURSE XII

USE OF SPECIAL APPLIANCES – II

Total Hours=75 **Total Credits=2.5** **Total Marks = 75**

Learning Outcome:

On the completion of this practical, the student teachers will be able to:

- Understand the need and significance of special appliances that are helpful for students with low vision;
- Equip himself/herself in skills in using optical, non-optical, electronic; &software/Apps relevant to totally blind and low vision;
- Demonstrate competency in carrying out complex mathematical calculations using Abacus and Taylor frame;
- Develop skills to do exercises involving decimal fraction;
- Perform skills to do exercises involving percentage ratio and average;

Course Content

Unit 1: Use of Low Vision Devices–optical, non-optical, electronic & software/Apps relevant to totally blind and low vision

Unit 2: Abacus: Exercises involving:

2.1 Fraction

2.2 Decimal fraction—addition, subtraction, multiplication and division

Unit3: Taylor Frame: Exercises involving:

3.1. Percentage

3.2. Ratio

3.3 Average

Practical Course

COURSE -XIII

INFORMATION AND COMMUNICATION TECHNOLOGY

Total Hours=75 **Total Credits=2.5** **Total Marks = 75**

Learning Outcome:

On the completion of this practical, the student teachers will be able to:

- Understand the nature of Information and Communication Technology;
- Acquire knowledge about Computers and Computer Applications;
- Get acquainted about Assistive Software for the visually impaired;
- Develop skills related to basic Computer applications and the constructive usage of internet;
- Gain hands-on practical experience in the application of ICT while teaching students with visual impairment;

Course Content

Unit 1: Nature of Information and Communication Technology

1.1 Meaning and scope of information and communication technology;

1.2 Technological input store duce disabling conditions;

1.3 Major ICT devices for the visually impaired(Introduction to Talking Aids, Vibration based Mobility and Time management devices, 3D Tactile Graphics, Refreshable Braille Display and Note Takers);

1.4 Evolution of ICT for the visually impaired;

Unit 2: Orientation to Computers and Computer Applications

2.1 Hardware

2.2 Software

Unit 3: Assistive Software for the Visually Impaired

3.1 Screen Reading Software in Computers and Mobile Devices

3.2 Magnification devices and Apps

3.3 Braille Translation (Embossers and Software)

3.4 Scanning and Reading Devices, SoftwareandApps

3.5 DAISY/ePUB3BookProduction

3.6. Online Accessible Libraries

3.7. Accessible Software Apps for Mobility using GPS location finder, object recognition, recreation and games

Unit4: Basic Computer Applications

4.1. Keyboard operations

4.2. Basic Windows Operations

4.3. Ease of Access operations(Magnifier, High Contrast, Mouse settings for Low Vision, Narrator, Keyboard settings for additional conditions like CerebralPalsy)

4.4. Using application software – MSOffice–Word,Excel and PowerPoint, Calculator, Language, Input methods and Calendar

Unit5: Internet applications

5.1 Internet search, drive operations(Google Search and Drive)

5.2 E-mail operations

5.3 Use of speech synthesizers

5.4 Adaptive devices for input access, reading and operations of persons with disabilities

Using internet, chat, social media, online meetings for learning and teaching purposes

Unit 6:Hands-on Practical experience for Unit 4.

Unit 7:Hands-on Practical experience for Unit 5

Practical Course

COURSE - XIV

Practice Teaching – II

Total Hours=75 **Total Credits=2.5** **Total Marks = 75**

Learning Outcome:

On the completion of this practical, the student teachers will be able to:

- Demonstrate various teaching skills that are required to teach children with visual impairment;
- Identify the need for teaching the expanded core curricular activities;
- Use the necessary TLM and adaptations wherever required;
- Reflect on his/her own way of teaching methods including evaluation practices;
- Attain mastery in teaching English language and Hindi/ State language

Course Content

Each pupil-teacher will be required to plan and teach 20 lessons—10 in English and 10 in Hindi/ State language

Practical Course

COURSE - XV

TECHNOLOGY FOR CHILDREN WITH LOW VISION

Total Hours=75 **Total Credits=2.5** **Total Marks = 75**

Learning Outcome

On the completion of this practical, the student teachers will be able to

- Get practical exposure about assistive devices for children with low vision;
- Get practical exposure about environmental modifications for children with Low Vision;
- Get practical training about special software for low vision;

Course Content

1. Student-teachers should provide training to children with low vision about assistive devices including ICT, Optical aids & Non-optical aids;
2. Student-teachers will visit a special/inclusive school and will prepare a report to suggest activities for environmental modifications at home, school, public places, means of transport and communication, common utility items, etc.;
3. Student-teachers will identify 2 students with low vision and will providing training about special software for low vision like Supernova etc.;

17.4 - Semester-IV

COURSE X

INCLUSIVE EDUCATION

Total Hours = 60 **Total Credits= 2** **Total Marks= 75 (Internal 30, External 45)**

Learning Objectives

On completion of this course, the student-teachers will be able to:

- Describe importance of diversity
- Explain the concept of inclusive education
- Describe various supports needed for inclusive education
- Explain the curricular strategies for inclusive education
- Enumerate the curricular strategies for inclusive education
- Explain the role of agencies for collaborating for inclusion

Unit I: Diversity and Inclusivity

1.1 Meaning and concept of diversity

1.2 Learner diversity

1.3 Disability as a human diversity

1.4 Diversity for sustainability

1.5 Strength of diversity for inclusivity

Unit II: Concept and Meaning of Inclusive Education:

2.1 Meaning and defining inclusion

2.2 Principles of inclusion

2.3 Integration vs. Inclusive education

2.4 Barriers and facilitators of inclusive education

2.5 Framework, Acts, Policy provisions for inclusive education

Unit III: Creating supports for inclusive education

3.1 Early identification and intervention for inclusion

3.2 Foundational literacy for inclusive education

3.3 Empowering families for inclusion

3.4 Sensitizing stakeholders and schools for inclusive education

3.5 Teacher preparation for inclusive education

Unit IV: Curricular strategies for inclusive education

4.1 Curricular challenges for students with disabilities and twice exceptional children

4.2 Need for curricular adaptations

4.3 Inclusive practices; Adaptations, accommodations and modifications

4.4 Types of curricular adaptations

4.5 Differentiated instructions and Universal design of learning

Unit V: Collaborations for inclusive education

5.1 Special schools and inclusive schools

5.2 Special educators and general teachers

5.3 Social welfare dept and Dept of education

5.4 Special and general teacher education programs

5.5 Voluntary organizations and Govt. agencies

Suggested readings:

Alur, M., Timmons, V., (2012). Inclusive Education Across Cultures, (3 rd ed.)., New Delhi, Saga Publication India Pvt Ltd.

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Vlachou, D. A. (1997) Struggles for Inclusive Education: An Ethnographic Study Disability, human rights, and society, Open University Press

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COURSE -XI

FAMILY AND COMMUNITY

Total Hours = 45 **Total Credits= 1.5** **Total Marks= 75 (Internal 30, External 45)**

Learning outcomes

On the completion of this course the student teacher will be able to:

- Explain the basic nature and role of family in development of a child;
- Describe the ways and means of involving and empowering families of children with disabilities;
- Explain the role of family in education of children with disabilities;
- Discuss the role of community in disability rehabilitation;
- Enumerate the community role in education of children with disabilities;

Course Content

Unit 1: Understanding family

1.1 Family; meaning, definition and characteristics - Families in the Indian context;

1.2 Structure, types of families and its impact on children's development;

1.3 Family culture and practices & its influence on children's mental and physical well-being;

1.4 Parenting and its types and its impact on children's education;

1.5 Challenges of parents of 21st century modern day learners;

Unit 2: Family and disability

2.1 Stages of reaction and impact and coping of having a child with disability;

2.2 Involving parents in diagnosis, fitment of aids and acceptance of disability by family;

2.3 Importance of family involvement and advocacy in interventional practices;

2.4 Concept, components and strategies of family empowerment;

2.5 Partnering for interventional practices;

Unit 3: Role of family in early childhood care and education (ECCE)

3.1 Parents as first teachers and family as first school;

3.2 Role of family in developing and executing IFSP and IEPs;

3.3 Family's role in developing foundational literacy in young children;

3.4 Supporting learning at home, school and in after school activities;

3.5 Role of family in facilitating inclusive education ;

Unit 4: Community for disability rehabilitation

4.1 Concept and types of communities;

4.2 Role of community in prevention early identification, and intervention of disability;

4.3 Community based inclusive development – need, importance and strategies;

4.4 Creating enabling environments- mobilizing local community resources towards the rehabilitation of persons with disabilities;

4.5 Issues and challenges in rehabilitation of child with disability in the community;

Unit 5: Role of community in education of children with disabilities.

5.1 Community awareness about disabilities - early identification, intervention and education;

5.2 Community support for home based education and in times of disasters;

5.3 Collaboration with Aganwadis and other Governmental agencies for education of children with disabilities;

5.4 Community as a stakeholder in special and inclusive education;

5.5 Safeguarding children with disabilities and their families in the communities;

Suggested Readings

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Hanson, M. J., & Lynch, E.W. (2004).*Understanding Families: Approaches to diversity, disability, and risk.* Baltimore, MD: Paul H. Brookes.

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Muralidharan R (1990). Early Stimulation Activities for Young Children, New Delhi: NCERT

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WHO (2015) Capturing the difference we make. CBR indicator manual. https://apps.who.int/iris/bitstream/handle/10665/199524/9789241509855_eng.pdf?sequence=1

Semester-IV

COURSE XII

PEDAGOGY OF MATHEMATICS EDUCATION

Total Hours = 60 Total Credits= 2 Total Marks= 75 (Internal 30, External 45)

Learning Outcomes

On the **c**ompletion of this course, the learner will be able to:

- Explain the concept and importance of Mathematics in school Curriculum and Objectives of teaching Mathematics;
- Demonstrate Knowledge about problems and limitations faced by Learners with blindness and low vision as well as their teachers in learning and teaching mathematics concepts and also the feasible solutions;
- Describe various methods of teaching Mathematic and Importance of Mental Arithmetic and Mathematic Laboratory;
- Explain the concept of Basic Arithmetic, Geometry, Algebra, and Polynomials;
- Explain the concept, objectives, importance and types of Evaluation and also adjustment in evaluation of Mathematics for learners with blindness and low vision;

Course content

Unit 1: Understanding Nature, Role and Objectives of teaching Mathematics

1.1 Concept, Scope, Nature, and Importance of Mathematics;

1.2 Role and values of Mathematics in day to day life;

1.3 Aims and objectives (General and Specific) of Teaching Mathematics to children with visual impairment;

1.4 Problems encountered by teachers in teaching Mathematics to visually impaired children;

1.5 Relationship of teaching Mathematics with other subjects;

Unit 2: Transactions of Mathematics Instructions to Visually Impaired

2.1 Problems of Learning/ Teaching Mathematics to visually impaired children;

2.2 Non-visual learning experiences, Specific teaching aids and equipment used in teaching of Mathematics such as Taylor Frame, Abacus, Geometrical Aids, Models, and Tactile charts;

2.3 Adaptations and modifications in Mathematic Curriculum for Visually Impaired;

2.4 Preparation of Mathematic Teaching Aids and Lesson Planning;

2.5 Qualities of a good Mathematics Teacher;

Unit 3: Methods of Teaching Mathematics at Elementary Stage

3.1 An overview of methods of teaching Mathematics: Inductive and Deductive Method, Analytic and Synthetic Method, Problem Solving and Heuristic Method, Project Method etc.;

3.2 Setting up a Mathematics Laboratory and collaboration in Inclusive setup;

3.3 Importance of Mental Arithmetic, Drill and Practice in Mathematics;

3.4 Mathematic Braille Codes;

3.5 Mathematics phobias, coping with failure and Mathematical Games & Puzzles;

Unit 4: Basic Arithmetic, Advance Arithmetic, Geometry, Algebra and Polynomials

4.1 Types of Numbers, Basic Arithmetic Operations (Addition, Subtraction, multiplication and division etc.), Laws of divisibility LCM and HCF, Ratio and Proportion;

4.2 Fractions (Simple, decimal, conversion from simple to decimal and vice versa), weights and measures such as Length, weight, mass, area, volume, Metric System, and measurement of time, Indices, Square and square root, cube and cube root;

4.3 Concept and types of Angles, Triangles, Quadrilaterals, Circle (Part, Circumference, Area), Polygons (Interior and exterior angles, convex and concave polygons);

4.4 Simple equations, Addition, subtraction, multiplication and division of algebraic expression;

4.5 Concept and definition of Polynomials, Addition, Subtraction, Multiplication, and Division of Polynomials;

Unit 5: Evaluation in Mathematics

5.1 Concept, objectives and significance of Evaluation in Mathematics;

5.2 Construction of Test Items for evaluating learning of Mathematics by Pupils;

5.3 Formative, Summative and Comprehensive and Continuous Evaluation (CCE);

5.4 Adjustments in evaluation due to limitations of blindness;

5.5. Stating learning outcomes in Mathematics and Diagnostic Testing with Remedial teaching;

Suggested Readings

Harold, J. (1994). **Mathematics: A Human endeavor**. New York: Penguin

Haylock, D. (2006). **Mathematics explained for Primary Teachers**. New Delhi: Sage

Mukhopadhyay, S., Jangira, N.K. & Mani, M.N.G. (1987).**Source Book for training teachers of Visually Handicapped**. New Delhi: NCERT.

NIVH (1992).**Handbook for the teachers of the Visually Handicapped**. Dehradun: NIVH

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Sharan, R. (2006). **Teaching of Mathematics**. New Delhi: APH Publishing Corporation

Siddiqui, M. H. (2005). **Teaching of Mathematics**. New Delhi: APH Publishing Corporation

Sidhu, K.S. (2006). **Teaching of Mathematics**. New Delhi: Sterling Publishes Private Limited

Common Paper

Employability Skills (Soft Skills)

Total Hours = 60 **Total Credits= 2**

Practical Course

COURSE XVI

BRAILLE - IV

Total Hours=63 **Total Credits=2.1** **Total Marks = 75**

Learning Outcome

On the completion of this practicum, the student teachers will be able to:

- Understand the need for using mathematical Braille codes for solving complex math exercises;
- Develop the competency to identify the mathematical Braille codes for fraction, radicals, mensuration and logarithm etc.;
- Demonstrate skills to solve complex math exercises using mathematical Braille codes;
- Transcribe the mathematical text into Braille ;
- Gain knowledge about Braille Science notations

Course Content

Unit 1: Braille Mathematics Code

1.1 Fraction—Complex and Hyper-Complex
1.1. Shape signs
1.2. Superscript and subscript
1.3. Radicals
1.4. Greek letters
1.5. Mensuration and Logarithm
1.6. Reference signs
1.7. Negation signs
1.8. Degree, infinite, prime, English letters
1.9. Compounded shape signs
1.10 Spatial arrangement of fractions

Unit2: Transcription of a 20-pageMaths text into Braille of the last class of primary/elementary education

Unit3: Science Notations

Practical Course

COURSE - XVII

USE OF SPECIAL APPLIANCES – III

Total Hours=75 **Total Credits=2.5** **Total Marks = 75**

Learning Outcome

On the completion of this practical, the student teachers will be able to:

- Use Abacus for doing exercises involving square root and percentage;
- Gain proficiency in doing mathematical calculations using abacus;
- Perform exercises involving percentage, profit and loss, simple and compound interest
- Understand the application of various Algebra types;
- Solve Algebra sums indicated in the mathematics book at elementary level;

Course Content

Unit 1: Abacus

1.1 Exercises involving: Square root and percentage

1.2 Revision and practice on Abacus

Unit2: Taylor Frame:

2.1 Exercises involving: percentage, profit and loss, simple and compound interest

Use of Algebra Types and doing Algebra sums as indicated in Unit 9of the theory paper "Teaching of Mathematics"

Practical Course

COURSE - XVIII

TEACHING ORGANIZING CO-CURRICULAR ACTIVITIES FOR CHILDREN WITH BLINDNESS AND LOW VISION

Total Hours=75 **Total Credits=2.5** **Total Marks = 75**

Learning Outcome

On the completion of this practical, the student teachers will be able to:

- Understand the need and significance of co- curricular activities for children with visual impairment;
- Demonstrate various Adapted Physical Education activities useful for students with total blindness and low vision;
- Develop skills to teach music, art and craft;
- Equip competencies to offer training in drama and dance movements;
- Demonstrate skills to teach literary activities such as elocution, debate, miming etc.

Course Content

Unit1: Adapted Physical Education

1.1 Body posture and gait;

1.2 Adapted Physical exercises and Yoga;

1.3 Athletics; Outdoor games with appropriate modifications/modifications for visually impaired

Unit2: Music

2.1 Nursery Rhymes and Children's Songs;

2.2 Patriotic sons;

2.3 Introduction to the octave, scales, Notations and basics of playing Harmonium as accomplishments;

2.4 Basic rhythmic patterns and orientation to playing of percussion instruments;

2.5 Techniques of using a microphone for individual group songs;

Unit 3: Art and Craft

3.1 Tactilegraphics for Art and Drawing;

3.2 Paper craft/Origami;

3.3 Pottery;

3.4 Clay Modeling and sculpture

Unit4: Dramatics

4.1 Body Language/non-verbal communication;

4.2 Dialogue delivery – voice modulation, pronunciations and stress, etc.

4.3 Facial expressions;

4.4 Stage management;

4.5 Scriptwriting for short play;

Unit5: Dance

5.1 Basic steps and body movement;

5.2 Dance costumes;

5.3 Group dance;

5.4 Stage Management;

5.5 Techniques of coordination;

5.6 Dance with play back music;

Unit6: Literary Activities

6.1 Elocution;

6.2 Extempore Speech;

6.3 Debate;

6.4 Language Games;

6.5 Miming;

Practical Course

COURSE - XIX

PRACTICE TEACHING – III

Total Hours=75 **Total Credits=2.5** **Total Marks = 75**

Learning Outcome

On the completion of this practical, the student teachers will be able to:

- Demonstrate various teaching skills that are required to teach children with visual impairment;
- Identify the need for teaching the expanded core curricular activities;
- Demonstrate teaching methods to train the children with visual impairment in Expanded Core Curriculum;
- Use the necessary TLM and adaptations wherever required ;
- Reflect on his/her own way of teaching methods including evaluation practices;

Course Content

Each pupil-teacher will be required to plan and deliver 10 lessons in the concerned school subject and 10 lessons in Expanded Core Curriculum keeping in view the needs of children with low vision.

Practical Course

COURSE - XX

COMMUNITY BASED PROJECT WORK

Total Hours=75 **Total Credits=2.5** **Total Marks = 75**

Learning Outcome

On the completion of this practical, the student teachers will be able to:

- Engage in community participatory activities ;
- Identify the children in the community who are totally blind and low vision;
- Conduct Visual stimulus training and remedial teaching;
- Prepare IEP and Case histories for at least two children with visual impairment;
- Preparing and disseminating pamphlets on the recent trends and issues related to the field of visual impairment;

Course Content

Each student teacher will be required to work with visually impaired children and their parents in the community and present a report on any three of the following activities relating to elementary education of visually impaired children:

1.1 Visual stimulus training for at least two children with low vision;

1.2 Remedial teaching in anyone of the curricular/expanded Core Curricular areas for at least two children;

1.3 Preparation of individualized education plan for at least two preschoolers/children with multiple disabilities(along with visual impairment)

1.4 Case histories of at least two children;

1.5 Need-assessment in respect of regular schools for meaningful inclusion of visually impaired children and preparing a brief set of guidelines for Regular classroom teachers;

1.6 Preparing a small pamphlet in Hindi/State language in conversational mode with illustrations, on raising awareness regarding visually Impaired children, development in technology, employment opportunities with case studies;

Practical Course

COURSE - XXI

ASSESSMENT OF CHILDREN WITH LOW VISION

Total Hours=60 **Total Credits=2** **Total Marks = 75**

Learning Outcome

The student teacher will be able to

- get practical exposure about functional assessment of Low vision;
- get practical training about glare test for children with Low Vision;
- get practical training about colour vision test for children with Low Vision;

Course Content

1. The trainees will carry out Functional assessment using any standardized Functional Assessment Test and also will investigate how child with low vision uses his/her vision for
   (i) near tasks, closer than 16 inches;
   (ii) intermediate tasks, 16 inches to 3 feet; and
   (iii) distance tasks, more than 3 feet away
2. The trainees will perform glare test by measuring the deterioration of the visual acuity or contrast sensitivity while shining a strong light toward the patient at an oblique angle using Brightness Acuity Tester (BAT) or the Miller Nadler Glare Tester.
3. Perform activity for colour vision or the ability to detect different colours and also hues within a colour. Colour vision testing activities to identity colour vision anomalies using Holmgren wool, D15 panel test, Ishihara's test (any one).