Bachelor of Education (Special Education) – Intellectual Disability / Visual Impairment

BRAILLE AND ASSISTIVE DEVICES

Semester-IV

**Course Code: B 10 (G) Credits: 02**

**Contact Week: 8 Maximum Marks: 50 (External -35 & Internal 15)**

**Introduction of the Course**

Braille, the embossed system of reading and writing for the blind along with its inventor, Louis Braille (1809-1852), has opened a wide range of avenues and opportunities for effective mainstreaming and empowerment for Persons with Visual Impairment. In addition, a plethora of devices are now available which help the visually impaired to access meaningful education in all school-subjects as also skills of independent living and economic activities.

This course familiarizes the student-teachers with the importance and operational aspects of Braille, which has stood the test of time and competition for the last about 185 years. It also introduces them to basic devices used for teaching blind and low vision children.

It is hoped that through the study of the course, the learners will be motivated to know more about these and various other devices and technologies and be in a position to help children with visual impairment/their parents to procure the needed devices with ease and speed.

**Learning Ourcomes**

After completing the course the student-teachers will be able to

1. Acquire basic information about Braille, its relevance and some important functional  
   aspects.
2. Get basic information on types and significance of different Braille devices.
3. Get acquainted with the types and significance of basic devices relating to  
   Mathematics, Science, Geography and Low Vision as also on sources of their  
   availability.

**Unit 1: Braille (10 hours)**

1. Louis Braille and the Evolution of Braille
2. Continuing Relevance of Braille vis-a-vis Audio Material
3. Braille, Contractions and Abbreviations--English Braille
4. Bharti Hindi/Regional Braille (Language), Braille Mathematics Code
5. Braille Reading and Writing Processes

**Unit 2: Braille Devices — Types, Description, Relevance (10 hours)**

1. Tradiitional Braille Writing Devices- Slate and Stylus, Brailler
2. Electronic Devices— Note takers and Refreshable Braille Displays
3. Braille Embossers
4. Braille Translation Software
5. Screen Readers-JAWS,NVDA & Narrator

**Unit 3: Other Devices - Types, Description, Relevance (10 hours)**

1. Mathematical Devices: Taylor Frame and Types, AlgebraTypes, Abacus, Geometry Kit
2. Geography: Maps--Relief, Embossed, Models
3. Science Material
4. Low Vision Aids—Optical, Non-Optical, Vision Training Material
5. Schemes and Sources of Availability

**Course Work/ Practical/ Field Engagement (Any Two)**

*Each Student-Teacher will*

a. Observe at least five devices in use in at least five school periods.

b. Draw up an item-wise price list of at least ten devices from different sources.

c. Prepare a presentation - Oral/ Powerpoint - on the relevance of Braille for children  
with visual impairment.

d. Prepare a report on the availability and use of Mathematical devices (at least two) in  
one special school and on inclusive school.

e. Make a report on the application of at least two non-optical devices for children with  
low vision.

**Essential Readings**

* A Restatement of the Layout, Definitions and the Rules of the Standard English  
  Braille System (1971). London: The Royal National Institute for the Blind.
* Ashkroft, S.C., & Henderson, F. (1963). Programmed Instruction in Braille.  
  Pittsburgh: Stanwick House.
* Lowenfeld, B. (1969). Blind Children Learn to Read. Springfield: Charles C. Thomas.
* Mani, M.N.G. (1997). Amazing Abacus. Coimbatore: SRVK Vidyalaya.
* Manual on Bharti Braille (1980). Dehradun: NIVH
* Olson, M. R. (1981). Guidelines and Games for Teaching Efficient Braille Reading.  
  New York: AFB.
* Proceedings: National Conference on Past and Present Status of Braille in  
  India(2001). New Delhi: All India Confederation of the Blind.

**Suggested Readings**

* Hampshire, B. (1981). Working with Braille - A Study of Braille as a Medium of  
  Communication. Geneva: UNESCO.
* Mani, M.N.G. (1992). Techniques of Teaching Blind Children. N.Delhi: Sterling  
  Publishers.
* Mellor, M. C. (2006). Louis Braille A Touch of Genius. Boston: National Braille Press.