

**B.Ed. Degree Programme**  
**Semester-I**  
**EDUCATION IN CONTEMPORARY INDIA**  
(4 Credits – 120 Hours)

***✍* COURSE OBJECTIVES:**

*On the successful completion of the course, the student teacher will be able to:*

1. acquire knowledge of terms and concepts related to education and philosophy.
2. develop overall understanding of education and philosophy.
3. analyse the implications of schools of philosophy and thinkers on education.
4. understand the socio cultural realities of Indian society.
5. appreciate the unity and strengths of Indian diversities based on region, religion, languages, political, caste, and community.
6. understand the salient features of our Constitution and constitutional provision pertaining to education
7. develop overall understanding of the working and recommendations of various Commissions and Committees constituted and policies developed for improving education in India.
8. analyse the issues in education

---

**Unit- I: EDUCATION AND PHILOSOPHY**

| <b>Learning Outcome</b>  | <b>Content</b>   | <b>Suggested strategies and approaches</b>  | <b>Assessment</b>  |
|--|--|---|--|
| 1. Defines education<br>2. Recognizes the differences among formal, informal and non-formal education<br>3. Recognizes the aims and functions of education<br>4. Recognizes the role of family, community, school and media as agencies of education.<br>5. Explains the relationship between education and philosophy | 1.1 Education: Meaning, definition, nature and scope of education. (formal, informal and non-formal )<br>1.2 Functions of education<br>1.3 Aims of education - (individual, social and national) and the four pillars of education.<br>1.4 Agencies of education – family, community, School and media.<br>1.5 Philosophy: meaning, definition and scope (meta - physics, epistemology and axiology).<br>1.6 Relationship between philosophy and education | <ul style="list-style-type: none"> <li>• Seminar</li> <li>• Assignment</li> <li>• Lecture</li> <li>• Peer learning</li> </ul> | <ul style="list-style-type: none"> <li>• Observation</li> <li>• Assignment</li> <li>• Report of discussion</li> <li>• Tests (oral &amp; written)</li> <li>• Report of seminar</li> </ul> |

---

**Unit-II: SCHOOLS OF PHILOSOPHY AND EDUCATIONAL THINKERS**

| <b>Learning Outcome</b>  | <b>Content</b>   | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>  |
|--|--|---|--|
| 1. Analyses the educational implications of schools of philosophy<br>2. Analyses the contributions of Thinkers towards education | 2.1 Idealism,<br>2.2 Naturalism<br>2.3 Pragmatism<br>( Educational implications of these schools – aims, curriculum, methodology, and discipline)<br>2.4 Swami Vivekananda,<br>2.5 Rabindranath Tagore<br>2.6 Mahatma Gandhi, (Contributions on Education) | <ul style="list-style-type: none"> <li>• Seminar</li> <li>• Assignment</li> <li>• Lecture</li> <li>• Peer learning</li> <li>• Small group discussion</li> </ul> | <ul style="list-style-type: none"> <li>• Observation</li> <li>• Assignment</li> <li>• Report of discussion</li> <li>• Tests (oral &amp; written)</li> <li>• Report of seminar</li> </ul> |

---

**Unit-III: SOCIO-CULTURAL REALITIES OF INDIAN SOCIETY**

| <b>Learning Outcome</b>   | <b>Content</b>   | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>  |
|---|--|---|--|
| 1. Recognizes the Diversity in Indian society and significance of Education for containing social diversity<br>2. Explains the Social inequality<br>3. Recognizes the Stratification of Indian Society<br>4. Discusses the role of education in addressing the needs of Marginalized groups in Indian society | 3.1 Diversity in Indian society: Nature, Challenges and Role of Education<br>3.1.1 Linguistic Diversity<br>3.1.2 Regional Diversity<br>3.1.3 Religious Diversity<br>3.2 Multiculturalism-Unity in diversity<br>3.3 Social inequality – Inequality, discrimination and marginalization<br>3.4 Stratification of Indian Society with reference to Caste, Class, Gender, Region (Rural – urban disparity)<br>3.5 Role of Education in addressing the needs of Marginalized groups in Indian society: SC/ST and Women. | <ul style="list-style-type: none"> <li>• Seminar</li> <li>• Assignment</li> <li>• Lecture</li> <li>• Peer learning</li> <li>• Small group discussion</li> </ul> | <ul style="list-style-type: none"> <li>• Observation</li> <li>• Assignment</li> <li>• Report of discussion</li> <li>• Tests (oral &amp; written)</li> <li>• Report of seminar</li> </ul> |

**Unit- IV: STATE AND EDUCATION**

| <b>Learning Outcome</b>  | <b>Content</b>  | <b>Suggested strategies and Approaches</b>  | <b>Assessment</b>  |
|--|---|---|--|
| 1. Recognises the preamble of Indian constitution.<br>2. Recognises the differences between fundamental rights and Directive principles of State policy.<br>3. Explains articles and amendments related to education.<br>4. Discusses the Concurrent status of education.<br>5. Discusses the RTE2010<br>6. Discusses the Tamilnadu uniform system of school education (2010)<br>7. Explains the flagship programmes on education by government of India.<br>8. Recognizes the functions of central and state apex bodies of education | 4.1 Indian Constitution:<br>4.1.1 Preamble<br>4.1.2 Fundamental Rights and Duties<br>4.1.3 Directive principles of State Policy<br>4.1.4 Articles and amendments related to education.<br>4.2 Concurrent status of education.<br>4.2.1 Role of Central and State governments in the development of education.<br>4.3 Right of children to Free and Compulsory Education act 2009 (RTE)<br>4.4 Tamil Nadu Uniform System of School Education Act, (2010).<br>4.5 Programmes to Achieve Universalisation of Education.<br>4.5.1 DPEP<br>4.5.2 SSA<br>4.5.3 RMSA<br>4.5.4 Mid- day meal Programme.<br>4.5.5 Samagra Shiksha Abhiyan<br>4.6 Role and functions of<br>4.6.1 NCERT<br>4.6.2 SCERT<br>4.6.3 NCTE<br>4.6.4 DIET in school education | <ul style="list-style-type: none"> <li>• Seminar</li> <li>• Assignment</li> <li>• Lecture</li> <li>• Peer learning</li> <li>• Small group discussion</li> </ul> | <ul style="list-style-type: none"> <li>• Observation</li> <li>• Assignment</li> <li>• Report of discussion</li> <li>• Tests (oral &amp; written)</li> <li>• Report of seminar</li> </ul> |

**Unit- V: POLICY FRAMEWORKS AND ISSUES ON EDUCATION**

| <b>Learning Outcome</b>  | <b>Content</b>  | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>  |
|--|---|---|--|
| 1. Recognizes the educational policies and commissions in India.<br>2. Describes the NCF2005<br>3. Analyses the implications of liberalization, privatization and globalization.<br>4. Explains PPP<br>5. Recognizes the Importance of Quality assurance in education. | 5.1 Kothari Commission (1964)<br>5.2 NPE (1986) and Programme of action (1992)<br>5.3 Yash Pal Committee Report- Learning without Burden. (1993)<br>5.4 National Knowledge Commission (2005).<br>5.5 Implications related to liberalization, privatization and globalization, and digitalization: role of education in improving the scenario.<br>5.6 Public private partnership (PPP) in School education<br>5.7 Quality assurance in Education. | <ul style="list-style-type: none"> <li>• Seminar</li> <li>• Assignment</li> <li>• Lecture</li> <li>• Peer learning</li> <li>• Small group discussion</li> </ul> | <ul style="list-style-type: none"> <li>• Observation</li> <li>• Assignment</li> <li>• Report of discussion</li> <li>• Tests (oral &amp; written)</li> <li>• Report of seminar</li> </ul> |

**SUGGESTED ACTIVITIES** (any two)

1. Prepare a report on importance of home, school, community and media in quality education.
2. Prepare a report on the impact of Right to Education Act on nearby schools.
3. Prepare a report on the problems of school education in India and suggest measures to overcome the same.
4. Analyze the draft new policy of education and prepare a report on it.

**PRESCRIBED READINGS**

1. Bhatia.K.K., & Narang.C.L.(2008). *Philosophical and Sociological Bases of Education*. Ludhiana: Tandon Publications.
2. Dash.B.N. (2011). *Teacher and Education in the Emerging Indian Society*. New Delhi: Neelkamal Publication.
3. Brubacher.J.S.(1962). *Modern Philosophies of Education*. New Delhi: TataMcGraw.
4. Chakarborty.A.K. (2008). *Education in Emerging Indian Society Meerut*: R.Lall BookDepot.
5. Chaube.S.P., & Chaube.A.(2000). *Philosophical and Sociological Foundation of Education*. Agra: Vinod Pusthak Mandir.
6. Dash.B.N (2002). *Teacher and Education in the Emerging Indian Society*. New Delhi: Neelkamal Publications Pvt. Ltd.
7. Delors.J. (1996). *Learning: The treasure within* - Report to UNESCO of the International Commission on Education for 21<sup>st</sup>Century.
8. GOI. (1966). *Report of the education commission: Education and national development*. New Delhi: Ministry of Education.
9. Gupta.S.(2005). *Education in Emerging India*. New Delhi: Shipra Publicatons.
10. Haseen Taj. (2008). *Current challenges in Education*, New Delhi: Neelkamal Publication.
11. Khan.M.I& Sharma.S.R. (1993). *Equality and Education*. New Delhi: Kanishka Publishers.
12. NCERT.(2006). *National Focus Group Paper on the Problems of Scheduled Castes and Scheduled Tribes; National Focus Group Paper on Gender*. New Delhi: NCERT.
13. Padma Charan Dhal, Kalyani Jena.,& Nalini Prava Mohanty. (2013).*Indian Society and Culture*. New Delhi: Atlantic Publishers and Distributors.
14. Rao.P.R (1988). *Indian Heritage and Culture*. New Delhi: Sterling Publishers Pvt. Ltd.
15. Sharma.R.N. (2003). *Philosophy and Sociology of Education*. New Delhi: Surjeet Publications.

16. Sharma.R.S. (2006). *Education in Emerging Indian Society*. New Delhi: Excellent Books.
17. Singaravelu. G. (2012). *Education in the emerging Indian Society*. New Delhi: Neelkamal Publications.
18. SrinibasBhattacharya. (2002). *Philosophical Foundations of Education*. New Delhi: Atlantic Publishers and Distributors.
19. Sunanda Ghosh.(2009). *Education in Emerging Indian Society*. New Delhi: Phi Learning Private Ltd.
20. Swaroop, Saxena N.R & Shikha Chaturvedi. (2013). *Teacher in Emerging Indian Society*. Meerut:R. Lall Book Dep.
21. Tedesco Juan Carlos.(1994.) *Thinkers on Education*. UNESCO Publishing Oxford IBH Publishing.
22. Yogendra K Sharma. (2002). *The Doctrines of the Great Indian Educators*. NewDelhi: Kanishka Publishers.

#### SUGGESTED READINGS

1. Deshpande. S. (2014). *The problem of caste*. New Delhi: Orient Blackswan.
2. Dube.S.C. (1990, 2005).*Indian Society*. New Delhi: National BookTrust
3. GOI. (1986). *National policy of education*.GOI.
4. GOI. (1992, 1998). *National policy on education*, 1986 (modified in 1992). Retrieved from [http://mhrd.gov.in/sites/upload\\_files/mhrd/files/NPE86-mod92.pdf](http://mhrd.gov.in/sites/upload_files/mhrd/files/NPE86-mod92.pdf)
5. GOI.(2009).*The right of children to free and compulsory education act, 2009*. Retrieved from [http://mhrd.gov.in/sites/upload\\_files/mhrd/files/rte.pdf](http://mhrd.gov.in/sites/upload_files/mhrd/files/rte.pdf).
6. Govinda.R. (ed). (2002) *India education report: a profile of basic education*. New Delhi: Oxford University Press.
7. Ghosh. S. C. (2007). *History of education in India*. New Delhi: Rawat Publications.
8. Naik.J.P.(1979) *Education Commission and After*. NewDelhi: APH Publishing Corporation: New Delhi. Also available in Hindi
9. Nambissan.G. B. (2009). *Exclusion and discrimination in schools: Experiences of dalit children*. Indian Institute of Dalit Studies and UNICEF.



Course Code: BEDICC02

Core Course

**B.Ed. Degree Programme**  
**Semester- I**  
**CHILD AND DEVELOPMENT**  
 (4 Credits - 120 Hours)

**✍ COURSE OBJECTIVES:**

*On successful completion of the course, the student teacher will be able to:*

1. understand education of psychology and child psychology
2. understand perspectives in growth and development of child
3. analyze the theories of growth and development of childhood
4. understand the individual differences of child and adolescence.
5. understand about personality, adjustment and mental health

**Unit- I: INTRODUCTION TO PSYCHOLOGY**

| <b>Learning Outcome</b>  | <b>Content</b>  | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>  |
|--|---|---|--|
| 1. Acquaints with the meaning, nature, and branches of psychology<br>2. Analyses the meaning, nature, scope and importance of educational psychology<br>3. Identifies the importance of child psychology<br>4. Explains the methods and techniques of child psychology | 1.1 Psychology: Meaning, nature and branches of psychology<br>1.2 Educational Psychology: Meaning, nature and scope of educational psychology<br>1.2.1. Relevance of educational psychology to teacher.<br>1.3 Child Psychology: Meaning, scope and importance of child psychology<br>1.4 Methods of child psychology: introspection, observation, interview, case-study, clinical, socio- metric, experimental method. | <ul style="list-style-type: none"> <li>• Lecture/ briefing</li> <li>• Group discussion</li> <li>• Assignment</li> <li>• Seminar through visual presentation</li> <li>• QA session</li> <li>• Peer learning</li> </ul> | <ul style="list-style-type: none"> <li>• Test (written/oral)</li> <li>• Assignment evaluation</li> <li>• Seminar presentation</li> <li>• Observation of classroom behaviour</li> </ul> |

**Unit-II: CHILDHOOD AND DEVELOPMENT**

| <b>Learning Outcome</b>   | <b>Content</b>   | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>  |
|---|--|---|--|
| <p>1. Examine the meaning, definitions, concept, principles and factors of growth and development</p> <p>2. Identifies different aspects of a child's cognitive, physical, moral, social and emotional development</p> <p>3. Compares and contrasts various theories and its contribution to child development.</p> <p>4. Identifies the developmental tasks of children.</p> | <p>2.1 Growth and development: Meaning, characteristics and principles of development</p> <p>2.2 Stages of development,</p> <p>2.3 Dimensions of development with reference of childhood and adolescence</p> <p>2.4 Childhood: Meaning, nature &amp; characteristics.</p> <p>2.4.1 Developmental tasks.</p> <p>2.5 Theories of development:</p> <p>2.5.1 Psychosocial stages (Erikson)</p> <p>2.5.2 Cognitive Development (Piaget)</p> <p>2.5.3 Moral development (Kohlberg)</p> <p>2.5.4. Psychosexual stages of development (Freud).</p> | <ul style="list-style-type: none"> <li>• Lecture through visual presentation</li> <li>• Group discussion</li> <li>• Assignment</li> <li>• Seminar</li> <li>• Talk by experts</li> <li>• Debate</li> <li>• Brainstorming</li> <li>• Peer learning</li> </ul> | <ul style="list-style-type: none"> <li>• Test (written/ oral)</li> <li>• Assignment evaluation</li> <li>• Observation of discussions</li> <li>• Observation of classroom behavior</li> </ul> |

---

**Unit-III: FACTORS INFLUENCING CHILD DEVELOPMENT**

| <b>Learning Outcome</b>  | <b>Content</b>   | <b>Suggested Strategies and Approaches</b>   | <b>Assessment</b>  |
|--|--|--|--|
| 1. Analyze the factors affecting growth and development of childhood and adolescent<br>2. Identifies the role of various socializing agencies on child development<br>3. Realizes the present scenario, problems and need of adolescents | 3.1 Factors influencing child development<br>3.1.1 family<br>3.1.2 school<br>3.1.3 peer group<br>3.1.4 community<br>3.1.4 society<br>3.1.5 media<br>3.2 Agencies of child development<br>3.3 Impact of urbanization and economic change on children and adolescents. | <ul style="list-style-type: none"> <li>• Lecture through visual presentation</li> <li>• Group discussion</li> <li>• Assignment</li> <li>• Seminar</li> <li>• Talk by experts</li> <li>• Panel discussion</li> <li>• Brainstorming</li> <li>• Auto instruction</li> </ul> | <ul style="list-style-type: none"> <li>• Test (oral/written)</li> <li>• Assignment evaluation</li> <li>• Observation of discussions</li> <li>• Observation of classroom behaviour</li> </ul> |

---

**Unit-IV: INDIVIDUAL DIFFERENCES**

| <b>Learning Outcome</b>  | <b>Content</b>  | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>  |
|--|---|---|--|
| 1. Identifies the types of intelligence and assessment of intelligence<br>2. Realizes the stages and promotion of creativity<br>3. Explains the concept, meaning, types and assessment of attitude, interest and aptitude. | 4.1 Intelligence: definition & types of intelligence- social, emotional and spiritual<br>4.2 Theories of intelligence<br>4.3 Assessment of intelligence<br>4.4 Creativity : definitions & characteristics<br>4.4.1 stages of creativity<br>4.2.2 fostering creativity among children.<br>4.5 Attitude: meaning, and types<br>4.6 Aptitude :meaning and types<br>4.7 Interest: meaning and types | <ul style="list-style-type: none"> <li>• Lecture/ briefing</li> <li>• Group discussion</li> <li>• Assignment</li> <li>• Seminar</li> <li>• Auto instruction</li> <li>• Peer learning</li> <li>• Talk by expert</li> <li>• QA session</li> <li>• Debate</li> </ul> | <ul style="list-style-type: none"> <li>• Test (written/oral)</li> <li>• Assignment evaluation</li> <li>• Seminar presentation</li> <li>• Observation of discussions</li> <li>• Observation of classroom behaviour</li> </ul> |

**Unit-V: PERSONALITY, ADJUSTMENT AND MENTAL HEALTH**

| <b>Learning Outcome</b>   | <b>Content</b>  | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>  |
|---|---|---|--|
| 1. Explains the meaning, definitions and theories of personality<br>2. Identifies the important role of teachers in developing the personality of the child<br>3. Realizes the mechanisms of adjustment in various situations<br>4. Identifies the role of teachers for improving the mental health of children | 5.1 Personality: Meaning, and characteristics,<br>5.1.1 Theories of personality: Type theory, Trait theory, Type cum trait theory, Freud's Psychoanalytic theory<br>5.1.2 assessment of personality, and role of teachers<br>5.2 Adjustment: Meaning, and importance<br>Mechanisms of adjustment<br>5.2.1 Maladjustment— Concept and its effect.<br>5.3 Mental health: Meaning, factors influencing mental health Role of teacher on improving mental health of children. | <ul style="list-style-type: none"> <li>• Lecture through visual presentation</li> <li>• Group discussion</li> <li>• Assignment</li> <li>• Seminar through visual presentation</li> <li>• Peer learning</li> <li>• Auto instruction</li> </ul> | <ul style="list-style-type: none"> <li>• Test (written/oral)</li> <li>• Assignment evaluation</li> <li>• Seminar presentation</li> <li>• Observation of discussions</li> <li>• Observation of classroom behaviour</li> </ul> |

**SUGGESTED ACTIVITIES (Any two)**

1. Visit primary/Secondary schools and prepare a report on mental health and hygiene programmes in schools.
2. View and prepare a report on short documentary films related to children
3. Report of Reflective experience of one's own childhood and adolescents.
4. Prepare a report on the current issues of children in Indian context

**📖 PRESCRIBED READINGS**

1. Agarwal.J.C. (2004). *Essentials of educational psychology*. NewDelhi: Vikas Publishing House.
2. Agarwal.J.C. (200). *Basic ideas in educational psychology*. New Delhi: Shipra publications.
3. Antony.A. (1998). *A textbook of educational psychology of guidance and counseling*. Herbert.
4. Aruna, Balachandra. (2008). *Elements of psychology and mental hygiene*. Universities Press.
5. Baron A. Robert (2000). *Psychology*, New Delhi: Prentice Hall of India.
6. Bert Lawra.E. (2014). *Child development*, New Delhi: PHI.
7. Bhatia H.R. (2005). *A text book of educational psychology*, New Delhi: Macmillan India Ltd.
8. Bhatnagar. S.,& Saxena. A. (2004). *Advanced educational psychology*. Surya publication, Meerut.
9. Chauhan.S.S. (2007). *Advanced educational psychology*. Vikas publishing house.
10. Dandapani.S. (2007). *Advanced educational psychology*. NewDelhi: Anmol Publications.
11. Elizabeth.B. (1977). *Developmental psychology*. New Delhi: Tata Mc Graw Hill Publishing Company.
12. Feldman S.R (2012). *Psychology*. New Delhi: Tata Mc Graw Hill education Pvt Ltd.
13. Fernald.L. Dodge., & Fernald, Peter.S. (2001). *Introductions to Psychology*. A.I.T.B.S. Publishers.
14. Govinda Rao.L. (2007). *Perspectives on Special Education*. Hyderabad: Neelkamal Publications Pvt Ltd.
15. Hurlock, Elizabeth.B. (1973). *Adolescent development*, NewDelhi: McGraw Hill Book Company.

16. Hurlock, Elizabeth.B (2015). *Child development*. New Delhi: Mc.Graw Hill Education.
17. Kuppaswamy. B.(2010). *Advanced educational psychology*. NewDelhi: Sterling publisher's private limited.
18. Legge Karen & Harari Philippe. (2000). *Psychology and education*. London: Heinemann Educational Publishers.
19. Mangal, S.K(2002). *Advanced educational psychology*". New Delhi: PHI Learning Private Ltd.
20. Mangal.S.K. (2007). *Essentials of educational psychology*. NewDelhi: Prentice hall ofIndia.
21. Mangal.S.K (2007). *Educating exceptional children*. NewDelhi: PHI Learning Private Ltd.
22. Mangal.S.K(2004). *Psychology of learning and development*. Ludhiana: Tandon Publications.
23. Munsinger .H. (1975). *Readings in child development*. New York: Holt Rinehart winson.
24. Nagarajan.K.,& Devaseetharaman. (2013). *Psychology of learning and human development*. Chennai : Sriram Publishers.
25. Papalia D.E., & Sally W.O. (1978). *Human development*. Mc Graw Hill Publishing company.
26. Robert S Feldman (2012). *Psychology and your life*. New Delhi: Tata Mcgraw HillPublishing.
27. Schaffer R.H (2004). *Introducing child psychology*. New Delhi: black well publishing.
28. ScottRuth & Scott .W.A (1998). *Adjustment of adolescents*. London: Routledge and KeganPaul Ltd.
29. Sharma N. (2003). *Understanding adolescence*. New Delhi: NBT.
30. Sharma.R.A(2008). *Fundamentals of special education*. Meerut:R.Lall Book Depot.
31. Sharma. Y (2004).*A textbook of educational psychology*. New Delhi:kanishka publisher.
32. Skinner E.C.(2011). *Child psychology*. New Delhi: Neelkamal Publication.
33. Suman Verma & Saraswathi,T.S (2002). *Adolescence in India*. New Delhi Rawat Publication.
34. Timpe A Dale ( 2001). *Creativity*. Jaico Publishing House.

- 
35. Vijaya, Kumara Kaushik., & Sharma.S.R.(2004). *Social psychology and education*". Anmol Publication.
  36. Young Kimball (2001). *Personality and problems of adjustment*. New Delhi: Surjeet Publications.

### SUGGESTED READINGS

1. Harry Adler. *Boost your creative intelligence*. New Delhi: Kogan Page India Pvt Limited.
2. Anit Woolfolk (2003). *Educational psychology*. New Delhi: Pearson Education India.
3. De Cecco John.P. and William Crawford. (1988). *The psychology of learning and instruction* (Ed.), New Delhi: Prentice Hall of India.
4. Dunlop.F. (1971). *The Education of feeling and emotions*, London: George Allen and Unwin.
5. Erik Erikson (1968). *Childhood and society*, New York:W.W. Norton & Co.
6. Guilford.J.P. (1977). *The Nature of human intelligence*. New York: McGraw Hill.
7. Hurlock.B. (1976). *Personality development*, New Delhi: Tata McGraw –Hill Publishing Company LTD.
8. Rajammal.P. Devadas, Jaya .N. (1984). *Child development*, Macmillan Press Limited.



Course Code: BEDIPC01

Pedagogic Course

**B.Ed. Degree Programme**  
**Semester- I**  
**ASSESSMENT OF LEARNING**  
 (4 Credits- 120 Hours)

 **COURSE OBJECTIVES:**

*On successful completion of the course, the student teacher will be able to:*

1. acquire knowledge about the concept of evaluation
2. acquire skill in developing tools and technique of evaluation
3. appreciate the role of teacher as a Evaluator
4. analyse the reforms in evaluation
5. apply the essential statistics in the process of evaluation

**Unit- I: INTRODUCTION TO EVALUATION**

| Learning Outcome   | Content  | Suggested Strategies and Approaches   | Assessment  |
|--|--|---|---|
| 1. Recognizes the relevance of measurement, assessment and evaluation in teaching learning process<br>2. Differentiates the various approaches to evaluation | 1.1 Measurement, Assessment and Evaluation<br>1.1.1 Meaning and relevance<br>1.1.2 Functions of Assessment- assessment for learning and assessment of learning<br>1.2 Approaches to Evaluation –Differences<br>1.2.1 Formative and Summative<br>1.2.2 Internal and External<br>1.2.3 Norms-referenced and Criterion-referenced | <ul style="list-style-type: none"> <li>• Discussion</li> <li>• Lecture</li> <li>• Peer learning</li> <li>• Seminar</li> <li>• Digital presentation</li> </ul> | <ul style="list-style-type: none"> <li>• Test (oral/ written)</li> <li>• Assignment</li> <li>• Seminar</li> </ul> |

---

**Unit- II: TOOLS AND TECHNIQUES OF EVALUATION**

| <b>Learning Outcome</b>  | <b>Content</b>   | <b>Suggested Strategies and Approaches</b>   | <b>Assessment</b>  |
|--|--|--|--|
| 1. Outlines the various tools for evaluation<br>2. Selects appropriate tools for evaluation<br>3. Prepares the achievement and diagnostic test | 2.1. Tools of Assessment- concept, merits, demerits Tests, Checklist, Rating scale, Cumulative record, Questionnaire, Inventory, Schedule, Anecdotal record<br>2.2 Techniques of Assessment: Observation, Interview, Self reporting.<br>2.3 Characteristics of a good evaluation tool : Validity, Reliability, Objectivity and Practicability<br>2.4 Achievement and Diagnostic Test : Concept, Purpose<br>2.4.1 Distinction between achievement and diagnostic test<br>2.4.2 Steps involved in the construction of an Achievement and Diagnostic test<br>2.5 Types of items | <ul style="list-style-type: none"> <li>• Seminar</li> <li>• Group discussion</li> <li>• Workshop</li> <li>• Peer learning</li> <li>• Discussion</li> <li>• Lecture-demonstration</li> <li>• Demonstration</li> <li>• Assignment</li> <li>• Digital presentation</li> </ul> | <ul style="list-style-type: none"> <li>• Test (oral/written)</li> <li>• Tool construction</li> <li>• Observation</li> <li>• Assignment</li> <li>• Seminar</li> </ul> |

---

**Unit- III: PREVALENT PRACTICES OF ASSESSMENT**

| <b>Learning Outcome</b>  | <b>Content</b>  | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>  |
|--|---|---|--|
| 1. Identifies drawback of present evaluation<br>2. Lists out the assessment techniques for better learning<br>3. Recognises participatory assessment.<br>4. Explains teacher's autonomy in assessment. | 3.1 Drawbacks of present assessment system.<br>3.2 Assessment for Better learning.<br>3.3 Participatory assessment<br>3.4 Teacher's autonomy in assessment. | <ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Digital presentation</li> <li>• Peer learning</li> <li>• Seminar</li> </ul> | <ul style="list-style-type: none"> <li>• Test (oral/ written)</li> <li>• Assignment</li> </ul> |

**Unit- IV: REFORMS IN EVALUATION**

| <b>Learning Outcomes</b>   | <b>Content</b>   | <b>Suggested Strategies and Approaches</b>   | <b>Assessment</b>  |
|--|--|--|--|
| 1. Lists out the recent trends and practices in assessment and evaluation<br>2. Explores the recent trends and practices<br>3. Identifies the need and relevance for CCE in classroom assessment | 4.1 Recent trends and practices in assessment and evaluation<br>4.1.1 Portfolios<br>4.1.2 Rubrics<br>4.1.3 Open book exam<br>4.1.4 Peer assessment.<br>4.1.5 Online and on-demand assessment<br>4.2 Continuous and comprehensive evaluation<br>4.2.1 Functions of CCE<br>Scholastic, co-scholastic, non-scholastic evaluation.<br>4.3 Grading-direct and indirect. | <ul style="list-style-type: none"> <li>• Digital presentation</li> <li>• Discussion</li> <li>• Debate</li> <li>• Peer learning</li> <li>• Invited talks</li> </ul> | <ul style="list-style-type: none"> <li>• Test (oral/written)</li> <li>• Seminar</li> <li>• Report writing</li> <li>• Debate</li> </ul> |

**Unit- V: STATISTICS IN EDUCATION**

| <b>Learning Outcome</b>  | <b>Content</b>  | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>   |
|--|---|---|---|
| 1. Identifies the need and importance of statistics in education<br>2. Lists out the types of graphical representation of data<br>3. Explains the correlation and types of correlation<br>4. Illustrates the | 5.1 Need and importance of statistics in education<br>5.2 Classification and tabulation of data<br>5.3 Graphical representation of data<br>5.3.1 Bar diagram,<br>5.3.2 Histogram,<br>5.3.3 Pie diagram,<br>5.3.4 Frequency polygon,<br>5.3.4 Cumulative Frequency curve.<br>5.4 Statistical methods of analysis | <ul style="list-style-type: none"> <li>• Lecture</li> <li>• Peer learning</li> <li>• Group discussion</li> <li>• Assignment method</li> </ul> | <ul style="list-style-type: none"> <li>• Class test</li> <li>• Presentation of report</li> <li>• Home assignment</li> </ul> |

|  |   |  |  |
|--|---|--|--|
| <p>various statistical method of analysis</p> <p>5. Uses the statistical method to solve problem</p> | <p>5.4.1 Measures of central tendency - Mean, Median, Mode.</p> <p>5.4.2 Measures of variability :</p> <p>a) Mean deviation</p> <p>b) Quartile deviation</p> <p>c) Standard Deviation</p> <p>5.4.3 Measures of Relationship</p> <p>5.4.3.1 Concept</p> <p>5.4.3.2 Types of Correlation</p> <p>5.4.3.3 Coefficient of correlation</p> <p>5.4.3.4 Spearman's Rank Order Correlation.</p> <p>5.5 Percentile and percentile ranks.</p> <p>5.6 Normal distribution</p> <p>5.6.1 Normal probability curve and its characteristics</p> |  |  |
|--|---|--|--|

#### SUGGESTED ACTIVITIES (Any two):

1. Prepare a tool for measuring any of the affective outcomes of the learner, administer it to a group of students (N>30) and interpret the result.
2. Visit a nearby school and collect information of from teachers regarding the advantages and disadvantages of the present assessment system and prepare a report.
3. Prepare a graphical representation of data with any sets of score.
4. Find out the coefficient of correlation existing between two sets of scores in school subject.

#### PRESCRIBED READINGS

1. Aggarwal.Y.P. (1998). *Statistical Methods-Concepts, Applications and Composition*. New Delhi: Sterling Publications Pvt. Ltd.
2. Aimee M. Bissonett. J.D.(2009). *Cyber Law- Maximising Safety and Minimising risk in Classrooms*. New Delhi: SAGE Publications India Pvt. Ltd.
3. Pearson Education Linn (2008) *Measurement and Assessment in Teaching*,9e, New Delhi, Pearson Education.

4. Parker, Jessica K. (2012). *Teaching Tech-Savvy Kids- Bringing Digital Media into the Classroom, Grade 5-12*. New Delhi: SAGE Publications. Pvt.Ltd.
5. Pathak (2012). *Measurement and Evaluation in Education*, New Delhi: Pearson Education.

### SUGGESTED READINGS

1. Care, Esther, Mc Gaw, Barry & Griffin, Patrick (2012). *Assessment and Teaching of 21<sup>st</sup> Century Skills*. New York: Springer.
2. Coolidge, Frederick L. (2013). *Statistics- A Gentle Introduction-3<sup>rd</sup> edition*. New Delhi: SAGE Publications Pvt.Ltd.
3. Jefferied, Julie & Diamond, Ian (2013). *Beginning Statistics – An Introduction for Social Scientists*. New Delhi: Sage Publications Pvt. Ltd.
4. Jimoyiannis, Athanassios. (2012). *Research on E-learning & ICT in Education*. New York: Springer.
5. Kist, William (2012). *The Socially Networked Classroom- Teaching in the New Media Age*. New Delhi: SAGE Publications Pvt. Ltd.
6. Nicols, Adelaide Doyle. Cox.J.Sabrina Mims., Johnson, Ruth Is., (2012). *Developing Portfolios in Education- A guide to Reflection, Inquiry & Assessment -2<sup>nd</sup> edition*. New Delhi: SAGE Publications Pvt. Ltd.
7. Nitko, Anthony J., & Brookhart. (2007). New Delhi: Susan. M. Educational Assessment of Students. Prentice Hall.
8. Pearson Series in Education (2012) *Essentials of Educational Technology and Management*, New Delhi: Pearson Education.
9. Quinlan, Audrey M. A *Complete Guide to Rubrics: Assessment Made Easy for Teachers*, KDCollege (2012). USA: Rowman Little field Education.
10. Reid, Howard M. (2013). *Introduction to Statistics-Fundamental Concepts and Procedures of Data Analysis*. New Delhi: SAGE Publications Pvt. Ltd.
11. Santhanam.S., Paneerselvam, A., & Sampath, K. (2001). *Introduction to Educational Technology*. New Delhi: Sterling Publishers Pvt. Ltd.

**B.Ed. Degree Programme****Semester-I****THEORETICAL BASES OF BIOLOGICAL SCIENCE EDUCATION**

(4 Credits - 120 Hours)

**✍ COURSE OBJECTIVES:***On successful completion of the course the student teacher will be able to*

1. understand the aims and objectives of teaching Biological Science
2. develop essential teaching skills
3. develop skill in planning and preparation of lesson plans
4. comprehend different methods and techniques of teaching Biological Science
5. understand various evaluation techniques

**Unit- I: AIMS AND OBJECTIVES OF TEACHING BIOLOGICAL SCIENCE**

| <b>Learning Outcome</b>  | <b>Content</b>  | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>   |
|--|---|---|---|
| 1. Identifies the nature, aims and objectives of teaching Biological Science | 1.1 Nature of Science- Science as a product and process<br>1.2 Aims and objectives of teaching Biological science | <ul style="list-style-type: none"> <li>• Briefing/ Lecture</li> <li>• Discussion</li> <li>• Seminar</li> <li>• Digital visual presentation</li> </ul> | <ul style="list-style-type: none"> <li>• Tests (Written/Oral)</li> <li>• Questioning</li> <li>• Seminar presentation</li> </ul> |
| 2. Differentiates between general and specific instructional objectives      | 1.3 General and specific instructional objectives based on Bloom's taxonomy<br>1.4 Bloom's Taxonomy (Revised)     | <ul style="list-style-type: none"> <li>• Question answer session</li> </ul>   |   |

**Unit- II: TEACHING SKILLS**

| <b>Learning Outcome</b>   | <b>Content</b>   | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>   |
|---|--|---|---|
| 1. Identifies various teaching skills<br>2. Practices various teaching skills | 2.1. Micro-teaching<br>2.1.1. Microteaching- Meaning, origin, need and characteristics<br>2.1.2. Micro teaching cycle<br>2.2. Teaching skills<br>2.2.1 Skill of probing questions<br>2.2.2 Skill of reinforcement<br>2.2.3 Skill of stimulus variation<br>2.2.4 Skill of using black boards<br>2.2.5 Skill of Explanation<br>2.2.6 Integration of skills | <ul style="list-style-type: none"> <li>• Lecture</li> <li>• Team teaching</li> <li>• Discussion</li> <li>• Demonstration</li> <li>• Practicing the skills</li> <li>• Video recording and screening</li> </ul> | <ul style="list-style-type: none"> <li>• Questioning</li> <li>• Peer evaluation</li> <li>• Observation schedule</li> <li>• Video presentation followed by feedback</li> </ul> |



**Unit- III: PLANNING OF INSTRUCTION**

| <b>Learning Outcome</b>   | <b>Content</b>  | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>   |
|---|---|---|---|
| 1. Identifies the steps in developing unit plan and lesson plan<br>2. Compares unit plan and lesson plan<br>3. Prepares unit plan and lesson plan | 3.1. Year plan<br>3.1.1. Developing year plan<br>3.2. Unit plan<br>3.2.1. Criteria of a good unit<br>3.2.2. Steps in unit plan<br>3.3 Lesson plan<br>3.3.1. Importance of planning a lesson<br>3.3.2. Characteristics of lesson plan<br>3.3.3. Herbartian steps in lesson planning<br>3.3.4. Lesson plan preparation based on Active Learning Methodology | <ul style="list-style-type: none"> <li>• Lecture</li> <li>• Group discussion</li> <li>• Peer learning</li> <li>• Workshop</li> <li>• Lesson plan preparation</li> </ul> | <ul style="list-style-type: none"> <li>• Lecture</li> <li>• Group discussion</li> <li>• Peer learning</li> <li>• Workshop</li> <li>• Lesson plan preparation</li> </ul> |

**Unit- IV: METHODS AND TECHNIQUES OF TEACHING BIOLOGICAL  
SCIENCE**

| <b>Learning Outcome</b>  | <b>Content</b>  | <b>Suggested Strategies and approaches</b>   | <b>Assessment</b>  |
|--|---|--|--|
| 1. Identifies the methods and techniques of teaching Biological Science    | 4.1 Methods of instruction<br>4.1.1 Lecture method<br>4.1.2 Demonstration<br>4.1.3 Laboratory method<br>4.1.4 Project method<br>4.1.5 Heuristic method<br>4.1.6 Assignment method   | <ul style="list-style-type: none"> <li>• Lecture</li> <li>• Group discussion</li> <li>• Brainstorming</li> <li>• Digital Visual Presentation</li> <li>• Assignment</li> <li>• Seminar</li> </ul> | <ul style="list-style-type: none"> <li>• Questioning</li> <li>• Observation</li> <li>• Test (oral/ written)</li> <li>• Observation of teaching</li> <li>• Assignment evaluation</li> <li>• Seminar presentation</li> </ul> |
| 2. Selects most appropriate methods and techniques to transact the content | 4.1.7 Activity based learning<br>4.1.8 Active learning methodology<br>4.2 Techniques of Teaching<br>4.2.1 Panel discussion<br>4.2.2 Brainstorming<br>4.2.3 Roleplaying<br>4.2.4 Seminar,<br>4.2.5 Symposium<br>4.2.6 Buzz Session |  |  |

**Unit-V: EVALUATION OF BIOLOGICAL SCIENCE**

| <b>Learning Outcome</b>  | <b>Content</b>   | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>  |
|--|--|---|--|
| 1. Identifies different types of evaluation<br>2. Prepares different types of test items<br>3. Constructs and administers achievement test and diagnostic test | 5.1 Concept of Evaluation<br>5.2 Objective based evaluation<br>5.3 Formative and summative evaluation<br>5.4 Different types of Test items<br>5.5 Types of tests<br>5.5.1 Achievement test-steps in construction<br>5.5.2 Diagnostic test-steps in construction<br>5.5.3 Prognostic test | <ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Workshop</li> <li>• Digital presentation</li> </ul> | <ul style="list-style-type: none"> <li>• Tests (written/oral)</li> <li>• Preparation of objective based test items</li> <li>• Construction &amp; administration of achievement test and diagnostic test</li> </ul> |

**SUGGESTED ACTIVITIES (Any Two)**

1. Prepare a unit plan in Biology for high school class.
2. Prepare a lesson plan based on Active Learning Methodology.
3. Prepare different types of test items for any one unit in Biology.
4. Prepare a diagnostic test

**📖 PRESCRIBED READINGS**

1. Ameeta. P (2010). *Techniques of teaching Biological Science*. New Delhi: Neel Kamal Publications Pvt. Ltd.
2. Anju Soni. (2005). *Teaching of Biological Science*. Ludhiana : Tandon Publications.
3. Das R.C. (1992). *Teaching of Science Amritsar* M/S KrishnaBros.
4. Jasim, Ahmad.(2011). *Teaching of Biological Science*, New Delhi: PHI Learning.
5. Mangal .S.K. (2005). *Teaching of Biology*. Meerut: Chandigrah Loyalk Publications.

6. Sharma .R.C (1984) *Modern Science teaching*. Meerut: Dhanpatrai and sons.
7. Sivarajan., & Faziluddin.A. (2005) *Science Education Calicut*: Calicut University Central Co-operative stores Ltd.
8. Sood .J.K. (1985), *Teaching Life Science*. Delhi: Kohli publications.
9. Sudha, Pahuja . (2010).*Teaching of Biological Sciences*. Meerut: R.Lall Book Depot.
10. Yadav M.S (2003) *Teaching of Science*, New Delhi: Anmol publication.

### SUGGESTED READINGS

1. Buffaloe, Neal, Thronberry. J.B.(1972) *Principles of Biology*. University press. New Delhi: Prentice Hall of India Ltd.
2. Saunders. H.N (1967). *The teaching of General Science in Tropical Secondary School*. London: Oxford University Press.
3. Bhatnagar.A.B., & Bhatnagar S.S (2010) *Teaching of Science*. Meerut: R. Lall Book Depot.
4. Bhuvaneswara, Lakshmi, G.Subba Rao. K.,& Digumarti Bhaskara Rao (2006). *Methods of Teaching Biology*. New Delhi: Discovery publishing house.
5. S.P. Kulshreshtha. (2010).*Teaching of Science*, Meerut: R.Lall Book Depot.
6. Marlow Ediger., & D.Bhaskara Rao. (2005) *Teaching Science Successfully*. New Delhi: Discovery publishing house.

---

*Course Code: BED1PC03*

*Pedagogic Course*

**B.Ed. Degree Programme**

**Semester-I**

**THEORETICAL BASES OF ENGLISH EDUCATION**

(4 Credits -120 Hours)

***📖* COURSE OBJECTIVES:**

*On successful completion of the course, the student teacher will be able to*

1. comprehend the aims and objectives of language teaching
2. familiarise with the ways of employing teaching skills for better instruction.
3. create teaching manuals by incorporating relevant activities for effective teaching.
4. synthesize with the methods ,approaches and theories for use in the English classroom
5. evaluate the effective use of learning resources.

**Unit- I: AIMS AND OBJECTIVES OF TEACHING ENGLISH**

| <b>Learning Outcome</b>   | <b>Content</b>   | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>   |
|---|--|---|---|
| 1. Identifies the divergent role of language in life<br>2. Comprehends the aims and objectives of language teaching<br>3. Applies the concept of Bloom's taxonomy of instructional objectives | 1.1 Nature and Scope of Language - Role of Language in Life: History of English language in India – Importance of English Language Learning –Intellectual, Emotional, Social and Cultural importance, Principles of language teaching – use of mother tongue in the English class<br>1.2 Aims and objectives of teaching English - general and specific aims- Difference between aims, objectives and specifications<br>1.3 Blooms Taxonomy of educational objectives - Objectives of teaching English as first language and second language | <ul style="list-style-type: none"> <li>• Lecture-discussion</li> <li>• Seminar</li> <li>• Lecture-discussion</li> <li>• Small Group Discussion</li> </ul> | <ul style="list-style-type: none"> <li>• Test (written/oral)</li> <li>• QA Session</li> <li>• Seminar Presentation</li> <li>• Practice tests</li> </ul> |

**Unit- II: TEACHING SKILLS**

| <b>Learning Outcome</b>   | <b>Content</b>   | <b>Suggested Strategies and Approaches</b>   | <b>Assessment</b>   |
|---|--|--|---|
| 1. Realises the role of microteaching skills in classroom instruction | 2.1 Micro-teaching Skills: Meaning, Definition and importance<br>2.2 Teaching skills for class room instruction–skill of probing questions, skill of reinforcement ,skill of introduction, skill of explanation, skill of stimulus variation, skill of black board writing – integration of skills | <ul style="list-style-type: none"> <li>• Lecture</li> <li>• Demonstration</li> <li>• Group Method</li> </ul> | <ul style="list-style-type: none"> <li>• Group Practice</li> <li>• Peer teaching</li> </ul> |

**Unit- III: DESIGNING TEACHING MANUAL/LESSON PLAN**

| <b>Learning Outcome</b>                         | <b>Content</b>  | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>   |
|---|---|---|---|
| 1. Designs teaching plans for different lessons | 3.1 Year plan, unit plan, lesson plan<br>3.2 Macro teaching –need and importance<br>3.3 Teaching of poetry, prose, composition, grammar, supplementary readers and Teaching vocabulary<br>3.4 Designing lesson plans for teaching /learning poetry, prose, composition, grammar and supplementary texts | <ul style="list-style-type: none"> <li>• Demonstration by experts</li> <li>• Practice under guidance</li> <li>• Preparation of Group/individual lesson plan/ teaching manual</li> </ul> | <ul style="list-style-type: none"> <li>• Observation</li> <li>• Submission of lesson Plans/ teaching manuals</li> <li>• Discussion Lessons / Criticism lessons</li> </ul> |

---

**Unit- IV: LANGUAGE TEACHING METHODOLOGIES, APPROACHES, AND THEORIES**

| <b>Learning Outcome</b>  | <b>Content</b>  | <b>Suggested Strategies and Approaches</b>   | <b>Assessment</b>   |
|--|---|--|---|
| 1. Comprehends methods, approaches and theories of teaching/learning English | 4.1 Methods :Grammar translation method, Direct method, Group method, Play way method<br>4.2 Approaches : Communicative, Situational and Structural approach<br>4.3 Theories: Behaviourism, Cognitivism- Constructivism | <ul style="list-style-type: none"> <li>• Lecture-discussion</li> <li>• Group discussion</li> <li>• Visual Presentation/ Electronic</li> <li>• Demonstration</li> </ul> | <ul style="list-style-type: none"> <li>• QA Session</li> <li>• Evaluation of Assignments</li> </ul> |

**Unit- V: LANGUAGE LEARNING SUPPORT RESOURCES**

| <b>Learning Outcome</b>   | <b>Content</b>  | <b>Suggested Strategies and approaches</b>   | <b>Assessment</b>   |
|---|---|--|---|
| <ul style="list-style-type: none"> <li>• Facilitates the effective use of learning resources</li> </ul> | 5.1 Teaching/learning resources-types<br>5.2 Pictures-Charts-Flash Card-Models-Radio Tape Recorder-Video Clips- Interactive White Board- LCD (liquid crystal display) Projector- Internet, CALL, (Computer Assisted Language Learning) Language Lab, magazines, newspapers, discussion, debates, workshops, seminar | <ul style="list-style-type: none"> <li>• ICT enabled group discussion</li> <li>• Hands-on experience with resources</li> <li>Assignment</li> </ul> | <ul style="list-style-type: none"> <li>• QA Session</li> <li>• Quiz</li> <li>• Assignment Evaluation</li> </ul> |



---

**SUGGESTED ACTIVITIES-** (Any Two)

1. Preparation of lesson plans based on ALM (Active Learning Method).
2. Identify and prepare different types of English teaching learning aids for children with special needs.
3. Prepare activities and tasks for effective teaching by including audio-video materials, Information Computer Technology and Internet.
4. Prepare a digital lesson plan for teaching English Vocabulary.

**📖PRESCRIBED READINGS**

1. Alexander .L.G. (1975). *A first book in comprehension, précis and composition*. Longman: Hongkong.
2. Brewster Jean,Gail Elli.,s & Denis, Giraf (1992). *The primary English teacher's guide*. Penguin Books: London.
3. Choudhary.N.R. (2002). *English Language Teaching*, Himalaya Publish House, Mumbai.
4. Cameron, Lynne (2001). *Teaching language to young learners*. Cambridge University Press: Cambridge.
5. Dave, Pratima.S (2002). *Communicative Approach to the Teaching of Bachelor of Education English as a Second Language*. Mumbai: Himalaya Publishing House.
6. Kohli A.L (2001). *Techniques of teaching English in the new millennium*. NewDelhi: Dhanpat Rai.
7. Singh.Y.K. (2005). *Teaching of English*. New Delhi: APH Publishing Corporation.

**📖SUGGESTED READINGS**

1. Grillett.M (1983). *Developing Reading Comprehension*, London: CUP.
2. Halbe Malati. (2005). *Methodology of English Teaching*, Himalaya Publishing House.
3. Parrot.M (1993). *Tasks for the Classroom Teacher*, London: Pergamon.
4. Davis, Paul & Mario Rinvoluceri. (1988).*Dictation: New Methods, New Possibilities*. Cambridge Handbook for Language Teachers.
5. Prabhu.N.S. (1987).*Second Language Pedagogy*. New York: Oxford University Press.
6. Sahni, Geeta. (2006). *Suggested Methodology of Teaching English*.
7. Sunwani.V.K.(2005). *The English Language and Indian Culture*.

---

*Course Code: BEDIPC04*

*Pedagogic Course*

**B. Ed. Degree Programme**

**Semester - I**

**THEORETICAL BASES OF HISTORY EDUCATION**

(4 Credits – 120 Hours)

***✍* COURSE OBJECTIVES:**

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

1. develop understanding about the aims, objectives and values of teaching History.
2. analyze the Bloom's Taxonomy of instructional objectives in teaching History.
3. equip in developing various teaching skills through micro-teaching practices.
4. develop skill in instructional planning and designing lesson transcripts.
5. adopt different instructional strategies and techniques in teaching and learning History.
6. apply the various modes of evaluation strategies in History at school level

---

**Unit- I: CONCEPTS, AIMS, OBJECTIVES AND VALUES OF TEACHING HISTORY**

| <b>Learning Outcome</b>  | <b>Content</b>  | <b>Suggested Strategies and Approaches</b>   | <b>Assessment</b>  |
|--|---|--|--|
| 1. Identifies the aims and objectives of teaching History<br><br>2. Endows with the significance of taxonomy of instructional objectives in teaching History | 1.1 Meaning, definitions and scope of History.<br>1.2 Need and importance of History in school curriculum.<br>1.3 Aims, Objectives and values of teaching History at different levels:<br>i) Primary,<br>ii) Secondary,<br>iii) Higher secondary.<br>1.4 Bloom's Taxonomy of instructional objectives<br><i>(Revised)</i><br>1.5 Instructional Objectives and Specifications. | <ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Visual presentation</li> <li>• Assignment writing</li> </ul> | <ul style="list-style-type: none"> <li>• Test (Oral/written)</li> <li>• QA Session</li> <li>• Evaluating Assignment</li> </ul> |

---

**Unit- II: ESSENTIAL REQUIREMENTS OF TEACHING HISTORY**

| <b>Learning Outcome</b>  | <b>Content</b>  | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>  |
|--|---|---|--|
| 1. Defines microteaching and equip in developing teaching skills through micro teaching practices.<br>2. Prepares lesson plan for practicing micro-teaching skill. | 2.1 Essential requirements of teaching competency and skills.<br>2.2 Micro teaching: Meaning, phases and steps.<br>2.3 Micro-teaching: Skills<br>(a) Probing Question<br>(b) Reinforcement<br>(c) Stimulus Variation<br>(d) Explanation<br>(e) Blackboard Writing<br>(f) Link Practice<br>2.4 Lesson plan writing, practice and assessment mechanism. | <ul style="list-style-type: none"> <li>• Lecture</li> <li>• Demonstration</li> <li>• Practicing</li> <li>• Discussion</li> <li>• Video recording and screening</li> </ul> | <ul style="list-style-type: none"> <li>• Test (Oral/ written)</li> <li>• QA Session</li> <li>• Observation Schedule</li> <li>• Video presentation followed by feed-back</li> </ul> |

---

**Unit- III: INSTRUCTIONAL PLANNING AND LESSON PLAN WRITING**

| <b>Learning Outcome</b>   | <b>Content</b>  | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>   |
|---|---|---|---|
| 1. Justifies the importance and phases of instructional planning in designing lesson transcripts.<br>2. Writes lesson plan. | 3.1 Instructional plan: Need and importance.<br>3.2. Year plan, Unit plan: importance<br>3.2.1.Characteristics of unit plan<br>3.2.2. Steps in unit plan<br>3.3. Lesson plan- Meaning<br>3.3.1. Importance of planning a lesson<br>3.3.2.Criteria of a good lesson plan<br>3.3.3. Herbartian Steps<br>3.3.4. Advantages, limitations of a lesson plan.<br>3.4. Comparison of Unit plan and Lesson plan. | <ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Group discussion</li> <li>• Work shop on lesson plan writing</li> <li>• Peer learning</li> </ul> | <ul style="list-style-type: none"> <li>• Assessing the lesson plan</li> <li>• Testing(oral/ written)</li> <li>• QA Session</li> </ul> |

**Unit- IV: INSTRUCTIONAL STRATEGIES AND APPROACHES IN  
TEACHING HISTORY**

| <b>Learning Outcome</b>  | <b>Content</b>  | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>  |
|--|---|---|--|
| 1. Analyzes the unique feature of different instructional methods suited for teaching History.<br>2. Adopts appropriate teaching methods for teaching History. | 4.1 Need and factors determining selection of teaching method.<br>4.2 Different methods and techniques for teaching History.<br>4.3. Teacher centered and Learner centered methods.<br>4.3.1 Lecture Method<br>4.3.2 Demonstration<br>4.3.3 Lecture cum Discussion method<br>4.3.4 Dalton plan<br>4.3.5 Heuristic method<br>4.3.6 Project method<br>4.3.7 Source method<br>4.3.8 Inductive and Deductive method<br>4.3.9 Brain Storming | <ul style="list-style-type: none"> <li>• Lecture cum Discussion</li> <li>• Report writing</li> <li>• Seminar</li> <li>• Peer learning</li> <li>• Interactive session</li> </ul> | <ul style="list-style-type: none"> <li>• Test (Oral/ Written)</li> <li>• QA session</li> <li>• Report writing</li> </ul> |

**Unit- V: EVALUATION OF HISTORY**

| <b>Learning Outcome</b>  | <b>Content</b>  | <b>Suggested Strategies and Approaches</b>   | <b>Assessment</b>   |
|--|---|--|---|
| 1. Analyses the various modes of evaluation strategies in learning history | 5.1 Concept of evaluation<br>5.2 Continuous and Comprehensive Evaluation (CCE), Grading system<br>5.3 Formative and Summative evaluation<br>5.4 Assessment Tools<br>5.5 Construction of achievement test<br>5.6 Peer Evaluation<br>5.7 Diagnostic and achievement test<br>5.8 Remedial teaching | <ul style="list-style-type: none"> <li>• Lecture</li> <li>• Discussion</li> <li>• Visual Presentation</li> <li>• Assignment</li> </ul> | <ul style="list-style-type: none"> <li>• Test (Oral/ Written)</li> <li>• QA Session</li> <li>• Evaluating Assignment</li> </ul> |

**SUGGESTED ACTIVITIES (Any Two):**

1. Prepare the instructional objectives and specifications based on revised Bloom's Taxonomy for teaching History.
2. Prepare a Year plan and Unit plan for Class VI.
3. Prepare a diagnostic test for any class at secondary level.
4. Discuss any one current issue by organizing a brain storming session and prepare a report.

**📖 PRESCRIBED READING:**

1. Aggarwal. J.C.(2003). *Teaching of History: A Practical approach*. New Delhi: sterling publications.
2. Bhata. R.L.(2004). *Contemporary teaching of History*. (2<sup>nd</sup>.ed.).New Delhi: Surjeet publications.
3. Dash. B.N.(1998). *Content and methods of teaching social studies*. Ludhiana: kalian publishers.
4. Kaur,Jaskiran Vir. (n.d.). *Teaching of History*. Ludhiana: Tandon Publications.

5. Kumar.S.P.K.,&Nowshad.P.P.(2009).*Socialstudiesintheclassroom:Trendsand methods*.
6. Kocchar.S.K.(1995). *Methods and techniques of teaching*. New Delhi: Sterling publishers.
7. Mathivaanan. (2013). *Varalarukarpithal*.
8. Paasi.B.K.(Ed.). *Becoming a better teacher: Amicro teaching approach*. Ahemadabad,Sahitya Mundranalaya.
9. Sivarajan.K.,Thulasideeran ., &Vijayan.N.K. (2007). *Social science education: Methods and techniques of teaching*. Calicut: Calicut university co-operative store.
- 10.Srinivas,Murthi.,Rao, IPrasad., & Rao,DigumartiBhaskara. (2004). *Methods of teaching History*. New Delhi: Discovery publishing.

#### SUGGESTED READING:

1. Aggarwal,J.C.(2003). *Teaching of History: A Practical approach*. New Delhi: Sterling publications.
2. Allen. D.,&Rayan.K.(1969). *Micro-teaching*. London: Adisonwiley.
3. Anderson.W.L.,&Krathwohl.D.R. (2001).Taxonomy of learning, teaching and assessing: *Arevision of Bloom's taxonomy of educational objectives. Handbook*. Newyork: Longmans green & co.
4. Bloom.B.S.(1956). *Taxonomy of educational objectives: cognitive do main*. Newyork: David MckayCo.
5. Clarck.L.H.(1974). *Teaching social studies in secondary school*. (2<sup>nd</sup>ed.).Newyork (NY): Mcmillian.
6. Dash.B.N.(1998). *Content and methods of teaching social studies*. Ludhiana: kalianpublishers.
7. Deve, Pushkin (2009). *Methods and techniques of teaching*. New Delhi: Sterling publishers.
8. Edigar.M., & Rao.B (2003). *Teaching social studies successfully*. New Delhi: Discovery publishing house.
9. Kumar.S.P.K.& Nowshad.P.P (2009). *Social studies in the classroom: Trends and methods*.
- 10.Kocchar.S.K.(1995). *Methods and techniques of teaching*. New Delhi: Sterling publishers.



Course Code: BEDIPC05

Pedagogic Course

B.Ed. Degree Programme

Semester-I

**THEORETICAL BASES OF MATHEMATICS EDUCATION**

(4 Credits – 120 Hours)

**COURSE OBJECTIVES:***On successful completion of the course, the student teacher will be able to:*

1. acquire knowledge about the aims and objectives of teaching mathematics.
2. acquire the knowledge of different teaching skills.
3. develop skill in planning instruction.
4. apply methods and techniques of teaching mathematics.
5. understand various evaluation techniques in mathematics

**Unit- I: AIMS AND OBJECTIVES OF TEACHING**

| Learning Outcome   | Content   | Suggested Strategies and Approaches  | Assessment   |
|--|---|--|--|
| 1. Familiarizes the relevance of Mathematics learning<br>2. Identifies the aims and objectives of teaching Mathematics | 1.1 Meaning and Nature of Mathematics<br>1.2 Need and significance of teaching Mathematics<br>1.3 Aims of teaching Mathematics<br>1.3.1 Practical aim<br>1.3.2 Social aim<br>1.3.3 Disciplinary aim<br>1.3.4 Cultural aim<br>1.4 Values of teaching Mathematics<br>1.5 Bloom's Taxonomy (Revised) of educational objectives - General Instructional objectives(GIOs) and Specific Learning Outcomes (SLOs) relating to cognitive, affective and Psychomotor domains | <ul style="list-style-type: none"> <li>• Lecture</li> <li>• Experience sharing</li> <li>• Illustrations</li> <li>• Auto instruction</li> <li>• Digital presentations</li> <li>• Seminar</li> <li>• Discussions</li> <li>• Demonstration</li> <li>• QA session</li> </ul> | <ul style="list-style-type: none"> <li>• Tests (oral/written)</li> <li>• Report</li> <li>• Seminar presentation</li> </ul> |

**Unit- II: TEACHING SKILLS**

| <b>Learning Outcome</b>                | <b>Content</b>   | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>   |
|--|--|---|---|
| 1. Practices different teaching skills | 2.1 Meaning, need and relevance of microteaching<br>2.2 Microteaching cycle<br>2.3 Developing the skills of<br>a) Explanation<br>b) Probing questions<br>c) Stimulus variation<br>d) reinforcement<br>e) using writing boards<br>2.4 Link practice | <ul style="list-style-type: none"> <li>• Discussion</li> <li>• Team teaching</li> <li>• Demonstration, video recording and screening</li> </ul> | <ul style="list-style-type: none"> <li>• Observation schedule</li> <li>• Video presentation followed by feedback</li> </ul> |

**Unit- III: PLANNING FOR INSTRUCTION**

| <b>Learning Outcome</b>   | <b>Content</b>  | <b>Suggested Strategies and Approaches</b>   | <b>Assessment</b>   |
|---|---|--|---|
| 1. Becomes aware of the need, relevance and stages of planning instruction in Mathematics<br>2. Gets acquainted with the steps of lesson planning | 3.1 Lesson Plan, unit plan and year plan - need and relevance<br>3.2 Format of a lesson plan: Herbartian steps – motivation, presentation, application, recapitulation and assignment | <ul style="list-style-type: none"> <li>• Lecture</li> <li>• Lesson plan preparation</li> <li>• Discussion</li> <li>• Individual work followed by group work</li> </ul> | <ul style="list-style-type: none"> <li>• Observation of class</li> <li>• Lesson transcript/ plan</li> </ul> |

---

**Unit- IV: METHODS AND TECHNIQUES OF TEACHING MATHEMATICS**

| <b>Learning Outcome</b>  | <b>Content</b>   | <b>Suggested Strategies and Approaches</b>   | <b>Assessment</b>   |
|--|--|--|---|
| 1. Identifies the methods and techniques of teaching mathematics | 4.1 Methods of teaching<br>4.1.1 Inductive, deductive and analogical thinking methods<br>4.1.2 analytic and synthetic and eclectic methods<br>4.1.3 heuristic method<br>4.1.4 laboratory method<br>4.1.5 problem solving method<br>4.1.6 project method–<br>4.1.7 Activity based learning (ABL)<br>4.1.8 Active Learning Method(ALM)<br>4.2 Techniques of teaching<br>4.2.1 Supervised Study<br>4.2.2 Group Discussion<br>4.2.3 Assignments<br>4.2.4 Constructivist approach | <ul style="list-style-type: none"> <li>• Lecture</li> <li>• Digital presentation</li> <li>• Seminar</li> <li>• Discussions</li> <li>• Debates</li> <li>• QA session</li> </ul> | <ul style="list-style-type: none"> <li>• Test (oral/written)</li> <li>• Assignment</li> <li>• Seminar presentation</li> </ul> |

**Unit- V: EVALUATION OF MATHEMATICS**

| <b>Learning Outcome</b>  | <b>Content</b>  | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>  |
|--|---|---|--|
| 1. Identifies the strategies of evaluation<br>2. Develops skill to construct test items in mathematics | 5.1 Concept and purpose of evaluation<br>5.2 Types of evaluation – formative and summative evaluation, Continuous and Comprehensive Evaluation<br>5.3 Types of tests– achievement test, diagnostic test and prognostic test<br>5.4 Different types of test items Construction of Achievement test | <ul style="list-style-type: none"> <li>• Lecture</li> <li>• Seminar</li> <li>• Discussions</li> </ul> | <ul style="list-style-type: none"> <li>• Tests (oral/ written)</li> <li>• Reports</li> </ul> |

**SUGGESTED ACTIVITIES** (Any two)

1. Prepare a report on learning Mathematics by students in class room situation.
2. Develop a CD on a lesson on learning Mathematics in high school with details.
3. Develop a lesson plan based on ALM.
4. Construct a diagnostic test in mathematics for any standard.

**PRESCRIBED READINGS**

1. Aggarwal, J.C. (2008). *Teaching of Mathematics*. UP: Vikas Publishing House.
2. James, Anice. (2005). *Teaching of Mathematics*. New Delhi: Neelkamal Publications.
3. James, Anice. (2006). *Techniques of teaching of Mathematics*. New Delhi: Neelkamal Publications.
4. Kumar. S. , & Ratnalikar, D.N. (2003). *Teaching of Mathematics*. New Delhi: Anmol Publishing House.

5. Kulshreshtha, A.K. (2008). *Teaching of Mathematics*. Meerut: R.Lall Books depot.
6. Mangal, S.K. (2000). *Teaching of Mathematics*. Ludhiana: R.P. FadonPrakash Brothers.
7. Passi, B.K. (1976). *Becoming a better teacher*.
8. Sharma, R.A.(2000).*Teaching-learning strategies and Mathematical creativity*.
9. Sidhu, K.S. (2000). *Teaching of Mathematics*. New Delhi: Sterling Publications.

### SUGGESTED READINGS

1. Bhatia, K.K. (2001). *Foundations of teaching learning process*. Ludhiana: Tandon Publications.
2. Mustafa, M.(2005).*Teaching of Mathematics*. NewDelhi: Deep and Deep Publications.
3. Pratap, N. (2008). *Teaching of Mathematics*. Meerut: R. Lall Books Depot.
4. Siddizui, M.H. (2005). *Teaching of Mathematics*. New Delhi: APH Publications.
5. Rao, D.B.,& Pushpalatha, D. (1995). *Achievement in Mathematics*. New Delhi: Discovery Publishing House.
6. Siddiqui, M.H. (2007). *Teaching of Mathematics*. New Delhi: APH Publishing House.

Course Code: BEDIPC06

Pedagogic Course

**B.Ed. Degree Programme  
Semester-I**

**THEORETICAL BASES OF PHYSICALSCIENCE EDUCATION**

(4 Credits - 120 Hours)

 **COURSE OBJECTIVES:**

*On successful completion of the course, the student teacher will be able to*

1. acquire knowledge about the nature, aims and objectives of teaching physical science.
2. develop essential teaching skills.
3. develop skill in planning and preparation of lesson plans.
4. develop a theoretical and practical understanding of the various methods of teaching physical science.
5. apply various test for the evaluation of physical science.

**Unit- I: NATURE, AIMS AND OBJECTIVES OF TEACHING PHYSICAL SCIENCE**

| <b>Learning Outcome</b>   | <b>Content</b>   | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>   |
|---|--|---|---|
| 1. recognizes the nature aim and objective of teaching physical science<br>2. Compare aims and objectives<br>3. Identifies bloom's taxonomy | 1.1 Nature of science<br>1.1.1 Science as a product and a process<br>1.1.2 Values of teaching physical science<br>1.2 Aims and objective<br>1.2.1 Meaning and difference<br>1.2.2 General and specific objectives of teaching physical science<br>1.2.3 Bloom's Taxonomy of Educational Objectives (Revised) | <ul style="list-style-type: none"> <li>• Digital presentation</li> <li>• Group discussion</li> <li>• Lecture</li> </ul> | <ul style="list-style-type: none"> <li>• Test (oral / written)</li> <li>• Assignment</li> </ul> |

---

**Unit- II: TEACHING SKILLS IN PHYSICAL SCIENCE**

| <b>Learning Outcome</b>  | <b>Content</b>  | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>  |
|--|---|---|--|
| 1. Recognizes the need for microteaching<br>2. Identifies the components<br>3. Practices various microteaching skills. | 2.1 Microteaching<br>2.1.1 Origin – need – phases-definition<br>2.1.2 Characteristics<br>2.1.3 Process<br>2.1.4 Advantages of micro teaching.<br>2.1.5 Skills<br>a) Probing question<br>b) Reinforcement<br>c) Stimulus variation<br>d) Explaining<br>e) Blackboard usage<br>f) Introduction<br>g) Link lesson. | <ul style="list-style-type: none"> <li>• Demonstration</li> <li>• Observation</li> <li>• Practicing skills</li> </ul> | <ul style="list-style-type: none"> <li>• Questioning</li> <li>• Feedback based on video</li> <li>• Observation schedule</li> </ul> |

## Unit- III PLANNING OF INSTRUCTION

| Learning Outcome  | Content   | Suggested Strategies and Approaches  | Assessment  |
|---|---|--|---|
| 1. Recognizes year plan, unit plan and lesson plan.<br>2. Writes a lesson plan based on Herbartian steps<br>3. Compares unit plan and lesson plan | 3.1 Year plan<br>3.1.1 Developing a year plan<br>3.1.2 Advantages<br>3.2 Unit plan<br>3.2.1 Definition<br>3.2.2 Characteristics of a good unit<br>3.2.3 Steps in Unit plan<br>3.2.4 Importance of unit plan<br>3.3 Lesson plan<br>3.3.1 Definition<br>3.3.2 Importance of planning a lesson<br>3.3.3 Criteria of a good lesson plan<br>3.3.4 Herbartian steps<br>3.3.5 Merits and demerits of lesson planning<br>3.4 Comparison of lesson plan and unit plan. | <ul style="list-style-type: none"> <li>• Lecture Method</li> <li>• Discussion</li> <li>• Group discussion</li> <li>• Workshop</li> <li>• Lesson segment Preparation</li> </ul> | <ul style="list-style-type: none"> <li>• Test (oral/written)</li> <li>• Assignment</li> <li>• Participant observation</li> <li>• Lesson transcript</li> </ul> |



---

**Unit- IV: METHODS OF TEACHING PHYSICAL SCIENCE**

| <b>Learning Outcome</b>   | <b>Content</b>  | <b>Suggested Strategies and Approaches</b>  | <b>Assessment</b>  |
|---|---|---|--|
| 1. List out various methods in teaching<br>2. Recognizes the most appropriate methods for teaching. | 4.1 Lecture Method<br>4.2 Demonstration method<br>4.3 Lecture cum Demonstration method<br>4.4 Scientific method<br>4.5 Heuristic method<br>4.6 Project method<br>4.7 Laboratory method-<br>4.8 Historical and Biographical method<br>4.9 Active learning Methodology (ALM). | <ul style="list-style-type: none"> <li>• Seminar</li> <li>• Group discussion</li> <li>• Debate</li> <li>• Brain Storming</li> </ul> | <ul style="list-style-type: none"> <li>• Test (oral/written)</li> <li>• Participation in group discussion</li> </ul> |

**Unit- V: EVALUATION OF PHYSICAL SCIENCE**

| <b>Learning Outcome</b>   | <b>Content</b>  | <b>Suggested Strategies and Approaches</b>   | <b>Assessment</b>  |
|---|---|--|--|
| 1. Recognizes the importance of evaluation in teaching learning process | 5.1 Evaluation<br>5.1.1. Concept and Need<br>5.1.2 Importance<br>5.1.3 Qualities of good test | <ul style="list-style-type: none"> <li>• Digital presentation</li> <li>• Group Discussion</li> <li>• Assignment</li> </ul> | <ul style="list-style-type: none"> <li>• Test (oral/written)</li> <li>• Test construction</li> <li>• Seminar presentation</li> </ul> |
| 2. Prepares an achievement and diagnostic test                          | 5.1.4 Formative and summative evaluation.   |  |  |
| 3. Suggests remedies for teaching physical science                      | 5.2 Different types of test   |  |  |
|   | 5.2.2 Achievement test  |  |  |
|   | 5.2.3 Diagnostic test   |  |  |
|   | 5.2.4 Prognostic test   |  |  |
|   | 5.3 Construction of an achievement test   |  |  |
|   | 5.4 Diagnostic test -Steps  |  |  |
|   | 5.5 Remedial teaching in physical science   |  |  |

**SUGGESTED ACTIVITIES (Any Two):**

1. Construct a diagnostic test in physical science (Standard VIII or IX).
2. Prepare a unit plan in physical science.
3. List out various specific instructional objectives from any one unit of standard VIII.
4. Prepare a lesson plan based on Active Learning Methodology.

**📖 PRESCRIBED READINGS**

1. Gupta. S. K. (1985). *Teaching of Physical Science in Secondary Schools*. Sterling Publication Pvt. Limited.
2. Radha, Mohan. (2010). *Teaching of physical science*. New Delhi: Neelkamal Publishers.
3. Sharma. R. C. (2006). *Modern Science Teaching*. New Delhi: Dhanpat Rai Publications.
4. Sivarajan, K., & Faziluddin. A. (2006), *Science Education*, Calicut University, Central Co-operative press.
5. Vanaja.M.(2010).*Educational technology*. New Delhi: Neelkamal Publishers.

**📖 SUGGESTED READINGS**

1. Bhatia.K.K. (2001). *Foundations of teaching learning process*. Ludhiana: Tandon Publication.
2. Das. R.C. (1985). *Science teaching in schools*. New Delhi: Sterling Publishers.
3. Joseph.T. T. (1982). *Modern trends in science education*. (2<sup>nd</sup> ed.) Kottayam, Kerala.
4. Mangal.S.K.& Uma Mangal. (2009). *Essentials of Educational Technology*. NewDelhi: PHI Learning Pvt. Ltd.
5. Mathew.T.K., & Molly kutty.T. M. (2011). *Science education: Theoretical bases of teaching and pedagogic analysis*. Chenganoor: Rainbow Book Publishers.
6. Mishra.R.C. (2008). *Lesson Planning*. NewDelhi: APH Publishing Corporation.
7. Panner, Selvam. A. (1976). *Teaching of Physical Science Tamil* .Government of TamilNadu.