Course Code: B1CC1801 Core Course

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
- 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

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
 Defines education Recognizes the differences among formal, informal and non-formal education Recognizes the aims and functions of education Recognizes the role of family, community, school and media as agencies of education. Explains the relationship between education and philosophy 	1.1 Education: Meaning, definition, nature and scope of education. (formal, informal and non- formal) 1.2 Functions of education 1.3 Aims of education - (individual, social and national) and the four pillars of education. 1.4 Agencies of education – family, community, School and media. 1.5 Philosophy: meaning, definition and scope (meta - physics, epistemology and axiology). 1.6 Relationship between philosophy and education	 Seminar Assignment Lecture Peer learning 	 Observation Assignment Report of discussion Tests (oral &written) Report of seminar

Unit-II: SCHOOLS OF PHILOSOPHY AND EDUCATIONAL THINKERS

Learning Outcome		Content	Suggested Strategies and Approaches	Assessment
1. Analyses the	2.1	Idealism,	Seminar	• Observation
educational	2.2	Naturalism	Assignment	Assignment
implications of	2.3	Pragmatism	Lecture	• Report of
schools of		(Educational implications of	Peer learningSmall group	discussion
philosophy		these schools –	discussion	• Tests (oral &
2. Analyses the		aims, curriculum, methodology, and		written)
contributions of		discipline)		• Report of
Thinkers towards education	2.4	Swami Vivekananda,		seminar
education	2.5	Rabindranath Tagore		
	2.6	Mahatma Gandhi, (Contributions on Education)		

Unit-III: SOCIO-CULTURAL REALITIES OF INDIAN SOCIETY

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
 Recognizes the Diversity in Indian society and significance of Education for containing social diversity Explains the Social inequality Recognizes the Stratification of Indian Society 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 3.1.1 Linguistic Diversity 3.1.2 Regional Diversity 3.1.3 Religious Diversity 3.2 Multiculturalism-Unity in diversity 3.3 Social inequality - Inequality, discrimination and marginalization 3.4 Stratification of Indian Society with reference to Caste, Class, Gender, Region (Rural – urban disparity) 3.5 Role of Education in addressing the needs of Marginalized groups in Indian society: SC/ST and Women.	 Seminar Assignment Lecture Peer learning Small group discussion 	 Observation Assignment Report of discussion Tests (oral & written) Report of seminar

Unit- IV: STATE AND EDUCATION

Unit- V: POLICY FRAMEWORKS AND ISSUES ON EDUCATION

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: Tata McGraw.
- 4. Chakarborty.A.K. (2008). *Education in Emerging Indian Society Meerut:* R. Lall Book Depot.
- 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: Neel kamal Publications Pvt. Ltd.
- 7. Delors.J. (1996). *Learning: The treasure within* Report to UNESCO of the International Commission on Education for 21stCentury.
- 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. Singravelu. G. (2012). *Education in the emerging Indian Society*. New Delhi: Neelkamal Publications.
- 18. Srinibas Bhattacharya. (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.

- 1. Deshpande. S. (2014). *The problem of caste*. New Delhi: Orient Blackswan.
- 2. Dube. S. C. (1990, 2005). Indian Society. New Delhi: National Book Trust
- 3. GOI. (1986). National policy of education.GOI.
- 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
- 5. GOI.(2009). *The right of childrent of ree and compulsory education act*, 2009. Retrieved from 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: B1CC1802 Core Course

B.Ed. Degree Programme Semester- I CHILD AND DEVELOPMENT

(4 Credits - 120 Hours)

EX 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

Learning	Content	Suggested	Assessment
Outcome		Strategies and Approaches	
 Acquaints with the meaning, nature, and branches of psychology Analyses the meaning, nature, scope and importance of educational psychology Identifies the importance of child psychology Explains the methods and techniques of child psychology 	 1.1 Psychology: Meaning, nature and branches of psychology 1.2 Educational Psychology: Meaning, nature and scope of educational psychology 1.2.1. Relevance of educational psychology to teacher. 1.3 Child Psychology: Meaning, scope and importance of child psychology 1.4 Methods of child psychology: introspection, observation, interview, case-study, clinical, socio- metric, experimental method. 	 Lecture/briefing Group discussion Assignment Seminar through visual presentation QA session Peer learning 	 Test (written/oral) Assignment evaluation Seminar presentation Observation of classroom behaviour

Unit-II: CHILDHOOD AND DEVELOPMENT

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
1. Examine the	2.1 Growth and	Lecture	• Test(written/
meaning,	development: Meaning,	through	oral)
definitions,	characteristics an	d visual	 Assignment
concept, principles	principles of development	presentation	evaluation
and factors of	2.2 Stages of	• Group	 Observation of
growth and	development,	discussion	discussions
development	2.3 Dimensions of development with	• Assignment	 Observation
2. Identifies different		• Seminar	of classroom
aspects of a	childhood and	 Talk by experts 	behavior
child's cognitive,	adolescence 2.4 Childhood:	• Debate	
	Meaning, nature	& Brainstorming	
physical, moral,	characteristics.	Peer learning	
social and	2.4.1. Develop-		
emotional	mental tasks.		
development	2.5 Theories of		
3. Compares and	development:		
contrasts various	2.5.1 Psychosocia stages	ıl eri	
theories and its	(Erikson),		
contribution to	2.5.2 Cognitive		
child	Develop- ment		
development.	(Piaget)		
4. Identifies the	2.5.3 Moral developmen	t	
developmental	(Kohlberg)		
1	2.5.4. Psycho-		
tasks of children.	sexual stages of		
	development		
	(Freud).		

Unit-III: FACTORS INFLUENCING CHILD DEVELOPMENT

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
 Analyze the factors affecting growth and development of childhood and adolescent Identifies the role of various socializing agencies on child development Realizes the present scenario, problems and need of adolescents 	3.1 Factors influencing child development 3.1.1 family 3.1.2 school 3.1.3 peer group 3.1.4 community 3.1.4 society 3.1.5 media 3.2 Agencies of child development 3.3 Impact of urbanization and economic change on children and adolescents.	 Lecture through visual presentation Group discussion Assignment Seminar Talk by experts Panel discussion Brainstorming Auto instruction 	 Test (oral/written) Assignment evaluation Observation of discussions Observation of classroom behaviour

Unit-IV: INDIVIDUAL DIFFERENCES

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
 Identifies the type of intelligence a assessment of intelligence Realizes the stage and promotion of creativity Explains the concept, meaning types and assessment of attitude, interest and aptitude. 	definition, & types of intelligence-social, emotional and spiritual 4.2 Theories of intelligence 4.3 Assessment of intelligence	 Lecture/briefing Group discussion Assignment Seminar Auto instruction Peer learning Talk by expert QA session Debate 	 Test (written/oral) Assignment evaluation Seminar presentation Observation of discussions Observation of classroom behaviour

Unit-V: PERSONALITY, ADJUSTMENT AND MENTAL HEALTH

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
 Explains the meaning, definitions and theories of personality Identifies the important role of teachers in developing the personality of the child Realizes the mechanisms of adjustment in various situation Identifies the role of teachers for improving of mental health of child 	5.1 Personality: Meaning, and characteristics, 5.1.1 Theories of personality: Type theory, Trait theory, Type cum Trait theory, Freud's Psychoanalytic theory 5.1.3 assessment of personality, and role of teachers 5.2 Adjustment: Meaning, and importance Mechanisms of adjustment 5.2.1 Maladjustment - Concept and its effect. 5.3 Mental health: Meaning, factors influencing mental health Role of teacher on improving mental health of children.	 Lecture through visual presentation Group discussion Assignment Seminar through visual presentation Peer learning Auto instruction 	 Test (written/oral) Assignment evaluation Seminar presentation Observation of discussions Observation of classroom behaviour

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*. New Delhi: Vikas Publishing House.
- 2. Agarwal. J. C. (200). *Basic ideas in educational psychology*. New Delhi: Shipra publications.
- 3. Antony. A. (1998). A text book 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. Kuppuswamy. 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*. New Delhi: Prentice hall of India.
- 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 Hill Publishing.
- 27. Schaffer R.H (2004). *Introducing child psychology*. New Delhi: black well publishing.
- 28. Scott Ruth & Scott .W. A (1998). Adjustment of adolescents. London: Routledge and Kegan Paul 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 RawatPublication.
- 34. Timpe A Dale (2001). Creativity. Jaico Publishing House.

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

- 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: B1PC1803 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
 Recognizes the relevance of measurement, assessment and evaluation in teaching learning process Differentiates the various approaches to evaluation 	1.1 Measurement, Assessment and Evaluation 1.1.1 Meaning and relevance 1.1.2 Functions of Assessment- assessment for learning and assessment of learning 1.2 Approaches to Evaluation – Differences 1.2.1 Formative and Summative 1.2.2 Internal and External 1.2.3 Norms- referenced and Criterion- referenced	 Discussion Lecture Peer learning Seminar Digital presentation 	 Test (oral/written) Assignment Seminar

Unit- II: TOOLS AND TECHNIQUES OF EVALUATION

	nrning tcome	Content	Suggested Strategies and Approaches	Assessment
for e 2. Select approximations tools evaluate 3. Prepachie	ous tools evaluation cts opriate	 2.1. Tools of Assessment-concept, merits, demerits Tests, Checklist, Rating scale, Cumulative record, Questionnaire, Inventory, Schedule, Anecdotal record 2.2 Techniques of Assessment: Observation, Interview, Self reporting. 2.3 Characteristics of a good evaluation tool: Validity, Reliability, Objectivity and Practicability 2.4 Achievement and Diagnostic Test: Concept, Purpose 2.4.1 Distinction between achievement and diagnostic test 2.4.2 Steps involved in the construction of an Achievement and Diagnostic test 2.5 Types of items 	 Peer learning Discussion Lecture- demonstration Demonstration Assignment Digital presentation 	 Test (oral/written) Tool construction Observation Assignment Seminar

Unit- III: PREVALENT PRACTICES OF ASSESSMENT

	Learning Outcome		Content		Suggested Strategies and Approaches	Assessment
1.	Identifies drawback		Drawbacks of	•	Lecture	• Test
2.	of present evaluation Lists out the assessment techniques for better learning	3.2	present assessment system. Assessment for Better learning. Participatory	•	Discussion Digital presentation Peer learning	(oral/written) • Assignment
3.	Recognises participatory assessment.		assessment Teacher's autonomy in	•	Seminar	
4.	Explains teacher's autonomy in assessment.		assessment.			

Unit- IV: REFORMS IN EVALUATION

1. Lists out the recent trends and practices in assessment and evaluation 2. Explores the recent trends and practices 3. Identifies the need and relevance for CCE in class 4.1 Recent trends and practices in assessment and evaluation 4.1.1 Portfolios 4.1.2 Rubrics 4.1.3 Open book exam 4.1.4 Peer assessment. 4.1.5 Online and on-	Learning Outcomes	Content	Suggested Strategies and Approaches	Assessment
room assessment 4.2 Continuous and comprehensive evaluation 4.2.1 Functions of CCE Scholastic, co-scholastic, non-scholastic evaluation 4.3 Grading-direct and indirect.	recent trends and practices in assessment and evaluation 2. Explores the recent trends and practices 3. Identifies the need and relevance for CCE in class	practices in assessment and evaluation 4.1.1 Portfolios 4.1.2 Rubrics 4.1.3 Open book exam 4.1.4 Peer assessment. 4.1.5 Online and on- demand assessment 4.2 Continuous and comprehensive evaluation 4.2.1 Functions of CCE Scholastic, co-scholastic evaluation 4.3 Grading-direct and	Digital presentationDiscussionDebatePeer learning	(oral/written)SeminarReport writing

Unit- V: STATISTICS IN EDUCATION

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
Identifies the need and importance of statistics in	5.1 Need and importance of statistics in education5.2 Classification and tabulation of data5.3 Graphical representation of data	 Lecture Peer learning Group discussion Assignment method 	Class testPresentation of reportHome assignment

			-
	education	5.3.1 Bar diagram,	
2.	Lists out the	5.3.2 Histogram, 5.3.3 Pie diagram,	
	types of	5.3.4 Frequency	
	graphical	polygon,	
		5.3.4 Cumulative	
	representation	Frequency	
	of data	curve. 5.4 Statistical methods	
3.	Explains the	of	
	correlation and	analysis	
	types of	5.4.1 Measures of	
		central tendency - Mean, Median,	
	correlation	Mode.	
4.	Illustrates the	5.4.2 Measures of	
	various	variability : a)Mean deviation	
	statistical	b) Quartile	
	method of	deviation	
		c) Standard Deviation	
	analysis	5.4.3Measures of	
5.	Uses the	Relationship	
	statistical	5.4.3.1 Concept 5.4.3.2 Types of	
	method to	Correlation	
	solve problem	5.4.3.3	
	1	Coefficient of correlation,	
		5.4.3.4	
		Spearman's	
		rank Order	
		Correlation. 5.5 Percentile and	
		percentile ranks.	
		5.6 Normal distribution	
		5.6.1 Normal	
		probability curve and its	
		curve and its	
		characteristics	

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 regarding the advantages and disadvantages of CCE from teachers and prepare a report.
- 3. Conduct an action research in your practice teaching school and suggest the remedies.
- 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.

- 1. Care, Esther, Mc Gaw, Barry & Griffin, Patrick (2012). *Assessment and Teaching of 21st Century Skills*. New York: Springer.
- 2. Coolidge, Frederick L. (2013). *Statistics- A Gentle Introduction- 3rdedition*. 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, A delaide Doyle. Cox.J. Sabrina Mims., Johnson, Ruth1s.,(2012). Developing Portfolios in Education- A guide to Reflection, Inquiry &Assessment -2nd edition. New Delhi: SAGE Publications Pvt. Ltd.
- 7. Nitko, Anthony.J., & Brookhart. (2007). NewDelhi: 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, KD College (2012).USA: Rowman Littlefield 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.

Course Code: B1PC1804 Pedagogic Course

B.Ed. Degree Programme Semester-I

THEORETICAL BASES OF BIOLOGICAL SCIENCE EDUCATION

(4 Credits - 120 Hours)

EX 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

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
 Identifies the nature, aims and objectives of teaching Biological Science Differentiates between general and specific instructional objectives 	1.1 Nature of Science- Science as a product and process 1.2 Aims and objectives of teaching Biological science 1.3 General and specific instructional objectives based on Bloom's taxonomy 1.4 Bloom's Taxonomy (Revised)	 Briefing / Lecture Discussion Seminar Digital visual presentation Question answer session 	 Tests (Written/Oral) Questioning Seminar presentation

Unit- II: TEACHING SKILLS

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
 Identifies various teaching skills Practices various teaching skills 	2.1. Micro-teaching 2.1.1.Microteaching- Meaning, origin, need and characteristics 2.1.2.Micro teaching cycle 2.2. Teaching skills 2.2.1 Skill of probing questions 2.2.2 Skill of reinforcement 2.2.3 Skill of stimulus variation 2.2.4 Skill of using black boards 2.2.5 Skill of Explanation 2.2.6 Integration of skills	 Lecture Team teaching Discussion Demonstration Practicing the skills Video recording and screening 	 Questioning Peer evaluation Observation schedule Video presentation followed by feedback

Unit- III: PLANNING OF INSTRUCTION

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
 Identifies the steps in developing unit plan and lesson plan Compares unit plan and lesson plan Prepares unit plan and lesson plan 	3.1.Year plan 3.1.1. Developing year plan 3.2. Unit plan 3.2.1. Criteria of a good unit 3.2.2. Steps in unit plan 3.3 Lesson plan 3.3.1.Importanceof planning a lesson 3.3.2.Characteristics of lesson plan 3.3.3.Herbartian steps in lesson planning 3.3.4.Lesson plan preparation based on Active Learning Methodology	 Lecture Group discussion Peer learning Workshop Lesson plan preparation 	 Lecture Group discussion Peer learning Workshop Lesson plan preparation

Unit- IV: METHODS AND TECHNIQUES OF TEACHING BIOLOGICAL SCIENCE

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
and techniques of teaching Biological Science 2. Selects most appropriate methods and techniques to transact the content 4.1.1 4.1.2 4.1.3 4.1.4 4.1.5 4.1.6 4.1.7 4.1.8 4.2 Techniques to Techniques to 4.2.1 4.2.2 4.2.3	2 Brainstorming 3 Role playing 4 Seminar, 5 Symposium	 Lecture Group discussion Brainstorming Digital Visual Presentation Assignment Seminar 	 Questioning Observation Test (oral/written) Observation of teaching Assignment evaluation Seminar presentation

	Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
1.	Identifies different	5.1Concept of Evaluation	 Lecture 	• Tests
	types of evaluation	5.2 Objective based evaluation5.3 Formative and	DiscussionWorkshop	(written/oral)Preparation of objective
2.	Prepares different types of test	summative evaluation 5.4 Different types of Test items	• Digital presentation	based test items
3.	items Constructs and	5.5 Types of tests 5.5.1 Achievement test-steps in	presentation	• Construction &
	administers achievement test and diagnostic test	construction 5.5.2 Diagnostic test- steps in construction		administration of achievement test and diagnostic test

Unit-V: EVALUATION OF BILOGICAL SCIENCE

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.

5.5.3 Prognostic test

- 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.

- 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: B1PC1805 Pedagogic Course

B.Ed. Degree Programme Semester- I THEORETICAL BASES OF ENGLISH EDUCATION

(4 Credits -120 Hours)

Z 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

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
 Identifies the divergent role of language in life Comprehends the aims and objectives of language teaching 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 1.2 Aims and objectives of teaching English - general and specific aims- Difference between aims, objectives and specifications 1.3 Blooms Taxonomy of educational objectives - Objectives of teaching English as first language and second language	 Lecture-discussion Seminar Lecture-discussion Small Group Discussion 	(written/oral)

Unit- II: TEACHING SKILLS

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
1. Realises the role	2.1 Micro-teaching	• Lecture	• Group
of microteaching	Skills: Meaning,	 Demonstration 	Practice
skills	Definition and	Group Method	• Peer
in classroom	importance		teaching
instruction	2.2 Teaching skills for		
	class room		
	instruction-skill of		
	probing questions,		
	skill of reinforcemen	nt	
	, skill of introduction	n,	
	skill of explanation,		
	skill of stimulus		
	variation, skill of		
	black board writing	-	
	integration of skills		

Unit- III: DESIGNING TEACHING MANUAL/LESSON PLAN

Learning	Content	Suggested	Assessment
Outcome		Strategies and	
		Approaches	
1. Designs	3.1 Year plan, unit	 Demonstration 	 Observation
teaching	plan, lesson plan 3.2 Macro teaching –	by experts	• Submission
plans for	need and	Practice under	of lesson
different	importance 3.3 Teaching of poetry,	guidance	Plans/
lessons	prose, composition,	 Preparation of 	teaching
	grammar, supplementary	Group/individual	manuals
	readers and	lesson plan /	 Discussion
	Teaching vocabulary	teaching manual	Lessons /
	3.4 Designing lesson		Criticism
	plans for teaching /		lessons
	learning poetry,		
	prose, composition, grammar and		
	supplementary		
	texts		

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

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
1. Comprehends	4.1 Methods :Grammar	Lecture-	 QA Session
methods,	translation method, Direct method, Group	discussion	• Evaluation of
approaches and	method, Play way	Group discussion	Assignments
theories of	method 4.2 Approaches:	• Visual	
teaching/learnin	* *	Presentation/	
g English	Situational and Structural approach	Electronic	
	4.3 Theories: Behaviourism,	• Demonstration	
	Cognitivism - Constructivism		

Unit- V: LANGUAGE LEARNING SUPPORT RESOURCES

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
• Facilitates the effective use of learning resources		 ICT enabled group discussion Hands-on experience with resources Assignment 	QA SessionQuizAssignment Evaluation

SUGESTED 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.

☐ 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*. Penguine 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*. NewDelhi: APH Publishing Corporation.

- 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 Rinvolucri. (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: B1PC1806 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: AIMS, OBJECTIVES AND VALUES OF TEACHING HISTORY

	Learning Outcome		Content		Suggested Strategies and Approaches		Assessment
1.	Identifies the aims	1.1	Meaning,	•	Lecture	•	Test (Oral/
	and objectives of		definitions and	•	Discussion		written)
2.	teaching History	1.2	scope of History.		Visual presentation	•	QA Session Evaluating
	Endows with the		Need and				
	significance of		importance of	•	Assignment writing		Assignment
	taxonomy of		History in school				
	instructional		curriculum.				
	objectives in	1.3	Aims, Objectives				
	teaching History		and values of				
			teaching History				
			at different levels:				
			i)Primary,				
			ii) Secondary,				
		1.4	iii) Higher secondary. Bloom's				
			Taxonomy of				
			instructional				
			objectives				
			(Revised).				
		1.5	Instructional				
			Objectives and				
			Specifications,				
			Learning				
			Objectives and				
			outcomes.				

Unit- II: ESSENTIAL REQUIREMENTS OF TEACHINGHISTORY

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
 Defines microteaching and equip in developing teaching skill through microteaching practices. Prepares lesson plan for practicing microteaching skill 	2.3 Micro-teaching: Skills (a) Probing Question (b) Reinforcement (c) Stimulus Variation (d) Explanation	 Demonstration Practicing Discussion Video recording and screening 	 Test (Oral/written) QA Session Observation Schedule Video presentation followed by feed-back

Unit- III: INSTRUCTIONAL PLANNING AND LESSON PLAN WRITING

Learning Outcome	Content	Suggested Strategies and	Assessment
 Justifies the importance and phases of instructional planning in designing lesson transcripts. Writes lesson plan. 	3.1 Instructional plan: Need and importance. 3.2. Year plan: Developing year Plan, Advantages 3.3. Unit plan- importance 3.3.1.characteristics of unit plan 3.3.2. Steps in unit plan 3.4. Lesson plan- Meaning 3.4.1. Importance of planning a lesson 3.4.2.Criteria of a good lesson plan 3.4.3. Herbartian Steps 3.4.4. Advantages and limitations of a lesson plan. 3.5. Comparison of Unit plan and Lesson plan.	 Approaches Lecture cum Discussion Group discussion Work shop on lesson plan writing Peer learning 	 Assessing the lesson plan Testing (oral/written) Q A Session

Unit- IV: INSTRUCTIONAL STRATEGIES AND APPROACHES IN TEACHING HISTORY

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
Analyzes the unique feature of different instructional methods suited for teaching History	teaching History. 4.3. Teacher centered and Learner centered methods. 4.3.1 Lecture Method 4.3.2 Demonstration 4.3.3 Lecture cum Discussion method 4.3.4 Dalton plan 4.3.5 Heuristic method 4.3.6 Project method 4.3.7 Source method 4.3.8 Inductive and Deductive	Approaches • Lecture cum Discussion • Report writing • Seminar • Peer learning • Interactive session	 Test (Oral/Written) QA session Report writing
	method 4.3.9 Brain Storming		

Unit- V: EVALUATION OF HISTORY

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
1. Analyses the various modes of evaluation strategies in learning history	 5.1 Concept of evaluation 5.2 Continuous and	 Lecture Discussion Visual Presentation Assignment 	• Test (Oral/ Written) • Q A Session • Evaluating Assignment

SUGGESTED ACTIVITIES (Any Two):

- 1. Preparing and practicing five micro-lessons with five different skills.
- 2. Preparation of Year plan, Unit plan and Lesson plan.
- 3. Evaluation of Peer during practice teaching.
- 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*.(2nd.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). *Social studies in the classroom*: Trends and methods.
- 6. Kocchar.S. K. (1995). *Methods and techniques of teaching*. New Delhi: Sterling publishers.
- 7. Mathivaanan. (2013). Varalaru karpithal.
- 8. Paasi.B.K. (Ed.). *Becoming a better teacher: A micro 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, I Prasad., & Rao, Digumarti Bhaskara. (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: A disonwiley.
- 3. Anderson.W. L., & Krathwohl. D. R. (2001). Taxonomy of learning, teaching and assessing: *A revision of Bloom's taxonomy of educational objectives*. *Handbook*. Newyork: Longmans green & co.
- 4. Bloom.B.S.(1956). *Taxonomy of educational objectives: cognitive domain*. New york: David MckayCo.
- 5. Clarck.L.H.(1974). *Teaching social studies in secondary school.* (2nded.). Newyork(NY): Mcmillian.
- 6. Dash.B.N. (1998). *Content and methods of teaching social studies*. Ludhiana: kalian publishers.
- 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: B1PC1807 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
 Familiarizes the relevance of Mathematics learning Identifies the aims and objectives of teaching Mathematics 	 1.1 Meaning and Nature of Mathematics 1.2 Need and significance of teaching Mathematics 1.3 Aims of teaching Mathematics 1.3.1 Practical aim 1.3.2 Social aim 1.3.2 Social aim 1.3.4 Cultural aim 1.4 Values of teaching Mathematics 1.5 Bloom's Taxonomy (Revised) of educational objectives General Instructional objectives General Instructional objectives (GIOs) and Specific Learning Outcomes (SLOs) relating to cognitive, affective and Psychomotor domains 	 Lecture Experience sharing Illustrations Auto instruction Digital presentati ons Seminar Discussions Demonstration QA session 	 Tests (oral/written) Report Seminar presentation

Unit- II: TEACHING SKILLS

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
1. Practices	2.1 Meaning, need and	 Discussion 	Observation
different	relevance of	Team teaching	schedule
teaching	microteaching	• Demonstration,	• Video
skills	2.2 Microteaching cycle	video recording	presentation
	 2.3 Developing the skills of a) Explanation b) Probing questions c) Stimulus variation d) reinforcement e) using writing boards 	and screening	followed by feedback
	2.4 Link practice		

Unit- III: PLANNING FOR INSTRUCTION

Le	arning Outcome	Content	Suggested Strategies and Approaches	Assessment
1.	Becomes aware	3.1 Lesson Plan, unit	• Lecture	• Observation
	of the need,	plan and year plan	• Lesson plan	of class
	relevance and	- need and	preparation	• Lesson
	stages of	relevance	 Discussion 	transcript/ plan
	planning	3.2 Format of a lesson	 Individual 	
	instruction in	plan: Herbartian	work	
	Mathematics	steps – motivation,	followed by	
2.	Gets	presentation,	group work	
	acquainted	application,		
	with the steps	recapitulation		
	of lesson	and assignment		
	planning			

N.V.K,S.D. College of Education, Attoor.

Unit- IV: METHODS AND TECHNIQUES OF TEACHING MATHEMATICS

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
1. Identifies the methods and techniques of teaching mathematics	4.1 Methods of teaching 4.1.1 Inductive, deductive and analogical thinking methods 4.1.2 analytic and synthetic and eclectic methods	 Lecture Digital presentation Seminar Discussions Debates QA session 	 Test (oral/written) Assignment Seminar presentation
	 4.1.3 heuristic method 4.1.4 laboratory method 4.1.5 problem solving method 4.1.6 project method— 4.1.7 Activity based learning (ABL) 		
	4.1.8 Active Learning Method(ALM) 4.2 Techniques of teaching 4.2.1 Supervised Study 4.2.2 Group Discussion 4.2.3 Assignments 4.2.4 Constructivist approach		

Unit- V: EVALUATION OF MATHEMATICS

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
 Identifies the strategies of evaluation Develops skill to construct test items in mathematics 	 4.1 Concept and purpose of evaluation 4.2 Types of evaluation – formative and summative evaluation, Continuous and Comprehensive Evaluation 4.3 Types of tests— achievement test, diagnostic test and prognostic test 4.4 Different types of test items Construction of Achievement test 	LectureSeminarDiscussions	 Tests (oral/written) Reports

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. Fadon Prakash 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*. New Delhi: 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: B1PC1808 Pedagogic Course

B.Ed. Degree Programme

Semester-I

THEORETICAL BASES OF PHYSICAL SCIENCE 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

1. Recognizes the nature, aim and objective of 1.1 Nature of science of 1.1.1 Science as a product and objective of 1.1.1 Nature of science objective of 1.1.1 Nature of science of 1.1.1 Nature of science objective of 1.1.1 Nature of science of 1.1.1 Nature of science objective obj	• Digital presentation	• Test (oral / written)
teaching physical science 2. Compare aims and objectives 3. Identifies bloom's taxonomy 1.2.1 Meaning and difference 1.2.2 General and specific objectives of teaching physical science 1.2.3 Bloom's Taxonomy of Educational Objectives (Revised)	 Group discussion Lecture 	• Assignment

Unit- II: TEACHING SKILLS IN PHYSICAL SCIENCE

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
 Recognizes the need for microteaching Identifies the components Practices various microteaching skills. 	2.1 Microteaching 2.1.1 Origin – need – phases-definition 2.1.2 Characteristics 2.1.3 Process 2.1.4 Advantages of micro teaching. 2.1.5 Skills a) Probing question b) Reinforcement c) Stimulus variation d) Explaining e) Blackboard usage f) Introduction g) Link lesson.	 Demonstration Observation Practicing skills 	 Questioning Feedback based on video Observation schedule

Unit- III PLANNING OF INSTRUCTION

	Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
1.	Recognizes	3.1 Year plan	• Lecture	• Test
	year plan,	3.1.1 Developing a year	Method	(oral/written)
	unit plan	plan	 Discussion 	 Assignment
	and lesson	3.1.2 Advantages	• Group	 Participant
	plan.	3.2 Unit plan	discussion	observation
2.	Writes a	3.2.1 Definition	Workshop	• Lesson
	lesson plan	3.2.2 Characteristics of a good unit	• Lesson	transcript
	based on	3.2.3 Steps in Unit plan	segment	
	Herbartian	3.2.4 Importance of unit	Preparation	
	steps	plan		
3.	Compares	3.3 Lesson plan		
	unit plan and	3.3.1 Definition 3.3.2 Importance of		
	lesson plan	planning a lesson		
		3.3.3 Criteria of a good lesson plan 3.3.4 Herbartian steps		
		3.3.5 Merits and demerits of lesson planning		
		3.4 Comparison of lesson plan and unit plan.		

Unit- IV: METHODS OF TEACHING PHYSICAL SCIENCE

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
1. List out various	4.1 Lecture Method	Seminar	• Test (oral/
methods in	4.2 Demonstration	• Group	written)
teaching	method	discussion	• Participation
2. Recognizes the	4.3 Lecture cum	• Debate	in group
most appropriate	Demonstration	Brain Storming	discussion
methods for	method		
teaching.	4.4 Scientific method		
	4.5 Heuristic method		
	4.6 Project method		
	4.7 Laboratory method-		
	4.8 Historical and		
	Biographical method		
	4.9 Active learning		
	Methodology		
	(ALM).		

Unit- V: EVALUATION OF PHYSICAL SCIENCE

Learning Outcome	Content	Suggested Strategies and Approaches	Assessment
the importance of evaluation in teaching learning process 2. Prepares an achievement and diagnostic test 3. Suggests remedies for teaching physical	 4.1 Evaluation 4.1.1 Concept and Need 4.1.2 Importance 4.1.3 Qualities of good test 4.1.4 Formative and summative evaluation. 4.2 Different types of test 4.2.1 Achievement test 4.2.2 Diagnostic test 4.2.3 Prognostic test 4.3 Construction of an achievement test 4.4 Diagnostic test -Steps 4.5 Remedial teaching in physical science 	Digital presentation	 Test (oral/written) Test construction Seminar presentation

SUGGESTED ACTIVITIES (Any Two):

- 1. Construct a diagnostic test in physical science (Standard VIII or IX).
- 2. Prepare a unit plan in physical science.
- List out various specific instructional objectives from any one unit of standard VIII.

☐ PRESCRIBED READINGS

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

□ SUGGESTED READINGS

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