

COURSE OUTLINE

Group A : Foundation Courses (FC)

Course / Paper	Title	Sessional	Term-end	Total
FC1	Basics of Education	20	80	100
FC2	Understanding the Learner and Learning Process	20	80	100
FC3	Curriculum and Curriculum Transaction	20	80	100
FC4	Contemporary Concerns and Issues in School Education	20	80	100
FC5	Assessing the Learner	20	80	100
FC6	Planning and Management of School	20	80	100
FC7&8	Pedagogy of School Subjects (Any two)*	40	160	200
	Total	160	640	800

* A student-teacher belonging to Science stream can choose one of the following combinations as his / her method subjects under pedagogy of school subjects.

- Physical Science and Mathematics
- Physical Science and Geography
- Physical Science and Biological Science

Group B : Practical Courses (Prc)

Course / Paper	Title	Sessional	Term-end	Total
Prc1	School Experience Programme			
	▪ Internship Activities	80	120	200
	▪ School-based Activities	60	40	100
Prc2	Workshop Activities	60	40	100
	Total	200	200	400
	Grand Total	360	840	1200

Group C : Add on Courses :

Course / Paper	Title	
AC1	Language Proficiency	To be examined internally and grades to be awarded
AC2	ICT - Skill Development	
AC3	Creative and Productive Work (CPW) (Any one of the following)	
	a) Commercial Art b) Performing Art (Indian Music) c) Fruit and Vegetable Preservation d) Physical, Health and Hygiene Education e) Spinning and Weaving f) Tailoring g) Wood Work	

Scheme of Study :

Area	Course	Credits *	Contact Hours (per week)	Marks
FC : Foundation Course				
FC1	Basics of Education	3.5	04	100
FC2	Understanding the Learner and Learning Process	3.5	04	100
FC3	Curriculum and Curriculum Transaction	3.5	04	100
FC4	Contemporary Concerns and Issues in School Education	3.5	04	100
FC5	Assessing the Learner	3.5	04	100
FC6	Planning and Management of School	3.5	04	100
FC7&8	Pedagogy of School Subjects	7.0	08	200
School Experience Programme				
PrC1	School Experience Programme	8.0	45 days	200
	▪ Internship Activities			
	▪ School-based Activities			
PrC2	Workshop Activities	1.0	01	100
Add on Courses **				
AC1	Language Proficiency	1.5	02	
AC2	ICT - Skill Development	1.5	02	

* One credit = 30 study hours

** CPW under Add on Courses (AC3) shall be transacted during morning hours in working days before 10.00 a.m. as per the convenience of the Institution. One hour in each working day shall be allotted for CPW.

DETAILED UNIT STRUCTURE OF THE COURSES

Group A: Foundation Courses (FC)

FC-1: Basics of Education

Objectives : After completion of this course the student-teacher shall be able to

- *Understand the relevance of Education in relation to individual, social and national development.*
- *Analyze the relevance of education in Indian socio-cultural context.*
- *Examine the influence of policy decisions on Education.*
- *Analyze the philosophical reflections and educational thoughts of the great educational thinkers.*
- *Understand the development of Education as a system, and the concerns and issues related to educational system.*

Unit 1 : Understanding Education

- Meaning, Nature and Scope of Education
- Education as a process; Shift in the process of education: Transmissionistic Approach to Constructivist Approach
- Aims of Education
 - Factors influencing aims of education
 - Individual and social aims
 - Aims of education according to Secondary Education Commission (1952-1953), Education Commission (1964-1966), National Policy on Education (1986 and 1992), and National Curriculum Framework (2005)
- Ideas of educational thinkers : Mahatma Gandhi, Rabindra Nath Tagore, Sri Aurobindo, Krishnamurti, Pandit Gopabandhu Das, Rousseau, John Dewey and Freire (with reference to aims and methods)

Unit 2 : Education in Socio-cultural Context of India

- Emerging trends of Indian society and culture
- Role of education in socio-cultural change, social control and development
- Education and Modernization.
- Education as an instrument for strengthening Democracy and promoting National Integration
- Education in the context of Globalization

Unit 3 : Education for National Development

- National development – Meaning, Scope and Indicators
- Education and National Development
- Education as an investment for Human Resource and Economic Development
- Education for sustainable development
- Education and Quality of life

Unit 4 : Education Policy Imperatives

- Education policy as a major concern of public policy - relevance and essentiality
- Constitutional Provisions on Education
- National Policy on Education, 1986 and its revised version(1992) with historical perspectives
- Implementation of Education Policy Recommendations - Problems and Strategies
- Right of Children to Free and Compulsory Education Act, 2009

Unit 5 : System and Structure of Education in India

- Sub-Systems of Social System and their inter-relationship; Significance of Education as a sub-system
- National System of Education in India
- Systemic Reforms in School Education - Post-NPE, 1986 reform scenario
- Concerns of the systemic reform - co ordination, quality assurance and feasibility (with special reference to NCF 2005)
- Universalization of Secondary Education - Need, Dimensions and Implementation in the context of RMSA

Sessional Work:

Each student-teacher is required to submit two assignments selecting one from each group given below:

Group I :

- Socio-Economic survey of a nearby habitation (Five Families only) and presentation of the report.
- Preparation and presentation of the report on activities / events in the local community relating to improvement of quality of life (taking any one aspect).
- Survey of educational status of families belonging to different social categories (5 families from each social category) and presentation of the report.

Group II :

- Appraisal of Educational Aims and Methods proposed by any one Educational Thinker in the present socio-cultural context.
- Analysis of the impact of modernization in the transformation of the local community
- Analysis of the effect of Education in empowering weaker sections of the society

Suggested Reading :

- Anand, C.L. et.al. (1983). *Teacher and education in emerging in ndian society*, New Delhi: NCERT.
- Clarke, P. (2001). *Teaching and learning: The Culture of pedagogy*. New Delhi: Sage Publication.

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- Cole, Luella (1950). *A history of education: Socrates to Montessori*. New York: Holt, Rinehart & Winston.
- Dewey, John (1916/1977). *Democracy and education*. New York: Macmillan.
- Dewey, John (1956). *The Child and the curriculum, school and society*. Chicago, Illinois: University of Chicago Press.
- Dewey, John (1997). *Experience and education*. New York: Touchstone,
- Govt. of India (1986/1992). *National policy on education*. New Delhi: Min. of HRD.
- Krishnamurthy, J. (1947) *On education*. New Delhi: Orient Longman,
- Krishnamurthy, J. (1953). *Education and significance of life*. New Delhi: B.I. Publications
- Kumar Krishna (1996). *Learning from conflict*. New Delhi: Orient Longman.
- Kumar Krishna (1996). *Learning from conflict*. New Delhi: Orient Longman.
- Margaret, K.T.(1999). *The open classroom*. New Delhi: Orient Longman.
- MHRD (2008). *Framework for implementation of Rashtriya Madhyamik Shiksha Abhiyan: A scheme for universalisation of access to and improvement of quality at the secondary stage*. New Delhi: Department of School Education and Literacy.
- MHRD (2011). *Sarva Shiksha Abhiyan : Framework for implementation based on the Right of Children to Free and Compulsory Education Act, 2009*. New Delhi: Department of School Education and Literacy.
- Ministry of Education (1966). *Education and national development*. New Delhi: Ministry of Education, Government of India.
- Ministry of Human Resource Development (2004). *Learning without Burden: Report of the National Advisory Committee*. New Delhi: MHRD.
- Mukherji, S.M., (1966). *History of education in India*. Vadodara: Acharya Book Depot.
- Naik, J.P. and Syed, N., (1974). *A student's history of education in India*. New Delhi: Macmillan.
- NCERT (2005). *National curriculum framework 2005*. New Delhi: National Council of Educational Research and Training.
- Peters, R.S. (1967). *The concept of education*. London: Routledge Kegan & Paul.
- Salamatullah, (1979). *Education in social context*. New Delhi: NCERT.

FC 2 : Understanding the Learner and Learning Process

Objectives : After completion of this course the student-teacher shall be able to

- *Understand the stages and processes of human development and plan developmental tasks especially focusing on the adolescence stage.*
- *Understand the individual differences in cognitive abilities among the learners and decide the teaching-learning strategies appropriate to the needs of the learners.*
- *Analyze nature of learning and types of learning.*
- *Appreciate higher mental processes of learner and role of teacher in promoting them.*

Unit 1 : Understanding Child and Adolescent

- Concept of growth and development – General principles of development
- Stages of development : developmental characteristics – Physical, Emotional, Social and Cognitive: their interrelationship
- Factors influencing development of child and adolescent (heredity, nutrition, child-rearing practices, socio-economic status, siblings and peers)
- Developmental Tasks - Specific needs and problems during adolescence
- Role of teacher in facilitating development

Unit 2 : Understanding the differences between Learners

- Areas of differences – Intelligence, Learning Style, Self-concept, Aptitude, Attitude, Achievement, Creativity (Concept, levels and educational provisions)
- Factors influencing individual difference
- Understanding differently-abled learners – Gifted and Slow Learner: Characteristics, Identification, Educational provisions
- Addressing individual difference – Grouping, individualized instruction
- Methods of studying learner behaviour – Tests (meaning and types), Observation (Types and Process) , Rating Scale, Self-report, Case Study

Unit 3 : Understanding Learning Process

- Learning as a process and as an outcome
- Relevance and applicability of theoretical perspectives in Learning
 - Behaviouristic (Pavlov & Skinner), Observation Learning Theory (Bandura)
 - Constructivist (Piaget & Vygotsky)
- Basic conditions of learning – Maturation, Readiness, Attention, Motivation, Fatigue, Materials, Tasks and Methods

Unit 4 : Organizing Learning

- Paradigms for organizing learning: Teacher-centric, Learner-centric and Learning-centric (characteristics and process)
- Modes of Learning: Face-to-Face and Distance Mode; Oral - Aural and digital; Individualized and group-based
- Organizing Learning in heterogeneous classroom: Ability Grouping, Heterogeneous Grouping, Grouping by interest, Grouping by Choice
- Promoting study habits, self-learning and learning-to-learn skills
- Role of teacher and school in facilitating learning

Unit 5 : Understanding Higher Mental Processes of Learners

- Intelligence - Characteristics and relation with learning; Multiple Intelligence
- Measurement of intelligence - Verbal, Non-verbal, Performance Tests; Group and Individual Tests
- Creativity - Characteristics and process; relation with intelligence
- Hindrances in developing creativity in school children
- Role of teacher in promoting creativity

Sessional Work: Each student-teacher is required to submit two assignments selecting one from each group given below:

Group I :

- Case Study of a problem child / a slow learner/ a disadvantaged child
- Administration of a group intelligence test and reporting the result.
- Rating of student-teachers' classroom performance (of any 5 student-teachers' performance)

Group II :

- Analysis of the common behavioural problems observed in the classroom suggesting the ways to address them.
- Preparation of five activities for promoting creativity among the school students.
- Analysis of the classroom problems of high and low achievers and the strategies to address these problems.

Suggested Reading :

Arnett, Jeffrey(2007). *Adolescence and emerging adulthood: A cultural approach*. (3rd edition). Upper Saddle River, N.J.: Pearson.

DeCecco, J.P.& Crawford, W.R. (1974). *Psychology of learning and instruction: Educational psychology*. Englewood Cliffs, N.J.: Prentice Hall.

Flavell, J.H. (1963). *The developmental psychology of Jean Piaget*. New York: Van Nostrand.

Gagné, R. M. (1985). *The conditions of learning and theory of instruction* (4th edition). New York: Holt, Rinehart and Winston

Gardner, Howard (1985). *Frames of mind: The theory of multiple intelligence*. New York: Basic Books.

Hilgard, E.R., Atkinson, R.L., & Atkinson, R.C. (1975). *Introduction to psychology*. Harcourt Brace

Hurlock, Elizabeth (1972). *Child development*. New York: McGraw Hill.

Hurlock, Elizabeth (2007). *Child growth and development*. New York: McGraw Hill.

Klausmeir, H.J., & Ripple, R.E.(1971). *Learning and human abilities: Educational Psychology*. New York: Harper & Row.

Lindgren, H.C. (1980). *Educational psychology in the classroom*. New York: Oxford University Press.

Nolen-Hoeksema, Susan, Fredrickson, Barbara L., Loftus, Geoff R., & Wagenaar, Willem,A.(2009). *Atkinson & Hilgard's Introduction to Psychology*. Belmont, California: Wadsworth

Woolfolk, A.E. (2012). *Educational psychology* (12th Edition). Englewood Cliffs, N.J.: Prentice Hall.

FC 3 : Curriculum and Curriculum Transaction

Objectives : After completion of this course the student-teacher shall be able to

- *Understand the importance and types of curriculum, and the process of curriculum development.*
- *Perform the role of the teacher as the facilitator of learning following the professional ethics of teaching.*
- *Demonstrate the understanding of the role of a teacher during different phases of teaching.*
- *Acquire and use different types of skills for effective teaching-learning transaction.*

Unit 1 : Understanding Curriculum

- Curriculum – Concept, importance and Objectives
- Types of Curriculum – Subject-centered, Activity-centered, Experience-centered, Learner-centered, Learning-centered
- Considerations for Curriculum Development – Philosophical, Psychological and Sociological
- Principles of Curriculum Construction
- Process of Curriculum Development

Unit 2 : Understanding Teaching

- Teaching as facilitating Learning : major shifts in Teacher Education as per NCF 2005
- Assumptions underlying teaching that facilitate learning; Phases of Teaching.
- Teaching as a Profession; Professional Development of Teachers: pre-service and in-service teacher education programme
- Teachers' Professional Ethics and Accountability

Unit 3 : Pre-Active Phase of Teaching

- Teacher's activities in the pre-active phase – visualizing, decision making on outcomes, preparation and organization
- Visualizing – Learner and Learning Readiness, Content Analysis, Learning Resources, Teaching-learning approaches and strategies.
- Decision-making on outcomes : Specification of Learning outcomes and related standards, time planning for transaction of activities / tasks
- Planning for out-of-classroom transaction, Identification and selection of available learning resources
- Preparation of Unit Plan and Lesson Plan

Unit 4 : Interactive Phase of Teaching

- Teacher's activities in the interactive phase - facilitation and management of learning;
- Methods of Teaching-learning: Narration-cum-Discussion, Demonstration, Observation, Discovery, Problem Solving, Project
- Core Teaching Skills: Set Induction, Explanation, Probing Question, Stimulus variations,
- Approaches to teaching-learning :
 - Individualized approach – Computer Assisted Learning(CAL), Programmed Learning (PL)

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- Group approach - cooperative and collaborative approaches, brain storming, role play and dramatization, group discussion, seminar, debate
 - Constructivist approach - 5E Model and ICON Model

Unit 5 : Post-Active Phase of Teaching

- Teacher's activities in the post-active phase assessment of student's learning, assessment of the first two phases of teaching, generating feedback
- Remedial and Enrichment Programme.
- Using learner achievement as a feedback for evaluating teacher/ teaching effectiveness
- Development of teaching competency : self-reflection of the teacher, observation and feedback by colleagues, appraisal by students

Sessional Work: Each student-teacher is required to submit two assignments selecting one from each group given below:

Group I :

- Preparation of a set of pre-active phase teaching activities on any topic.
- Observation of at least 5 lessons and analysis of the teaching skills employed.
- Preparation of a report on teacher's feedback for facilitating students' learning and students' feedback for improving teacher competencies.

Group II :

- Analysis of the role of the teacher in the development of curriculum
- Analysis of the state initiatives for teachers' professional development
- Identification of learning resources and designing of beyond-classroom activities for transacting a lesson.

Suggested Reading :

- Clarke, Prema (2001). *Teaching & learning : the culture of pedagogy*. New Delhi: Sage Publication.
- Dewey, John (1956). *The child and the curriculum*. Chicago, Illinois: University of Chicago Press.
- Dewey, John (1997). *Experience and education*. New York: Touchstone.
- Dewey, John (1997). *My pedagogic creed*. in D.J. Flinders and S.J. Thorton (eds.), *The Curriculum*
- Egan, K. (2005). *An imaginative approach to teaching*. San Francisco: Jossey-Bass.
- Jangira, N. K. & Singh, A. (1982). *Core teaching skills: The microteaching approach*. New Delhi: NCERT,
- NCERT (2005). *National curriculum framework 2005*. New Delhi: NCERT.
- NCTE (1990). *Policy perspective in teacher education*. New Delhi : NCTE
- Sharma, S. (2006). *Constructivist approaches to teaching and learning*. New Delhi: NCERT. *Studies Reader*. New York: Routledge, Kegan & Paul.
- Taba, Hilda (1962). *Curriculum development : theory and practice*. New York: Harcourt, Brace and Wald.

FC 4 : Contemporary Concerns and Issues in School Education

Objectives : After completion of this course the student-teacher shall be able to

- *Understand different forms and issues of inequality and inequity in education, and the ways to address them in the school and classroom situations.*
- *Realize the importance of the right to education and the provisions in the RTE Act 2009.*
- *Identify the indicators and standards of quality in education and implement the strategies for enhancing the quality of school education.*
- *Understand the domains of human rights and role of education to safeguard the rights.*
- *Realize the need for integration of environmental concerns in school education.*
- *Understand the strategies for development of life skills and the role of teachers in developing the life skills.*

Unit 1 : Equality and Equity in Education

- Equality and equity: Meaning, need and importance; Equality of educational opportunities - Related Constitutional provisions
- Nature and forms of inequality with reference to Gender, Socio-Economic Status, Socio-cultural Status, Minority (Linguistic & Religious), Locality (Rural-Urban-Tribal), Children with special needs (CWSN),
- Causes of inequity and Educational Provisions
- Inclusive Education for addressing inequity
- RTE, SSA, and RMSA: Provisions for addressing inequality

Unit 2 : Quality in Education

- Concept of quality in Education; Indicators of Quality Education - Academic and Organizational
- Quality improvement in Education - setting up standards for performance, supporting inputs, adoption of flexible strategies for learning, and monitoring
- Organizational strategies for enhancement of quality in school education
- Resource support Institutions for quality enhancement: NCERT, NUEPA, NCTE, NIOS, SCERT, IASE, CTE, DIET/DRC -Structure, functions, and ongoing programmes
- Role of teacher for enhancing quality in education

Unit 3 : Human Rights and Peace Education

- Human Rights: Concept; Constitutional and Institutional safeguards
- Domains of Human Rights: RTI, Poverty, Child Labour, Child Rights, Rights of Women; Role of Education in safeguarding Human Rights
- Peace Education: Concept and relevance in National and International contexts; Peace and quality of life
- Threats to Peace in regional, national and global contexts and their impact on quality of life
- Role of Education in promoting Peace

Unit 4 : Education for Conservation of Environment

- Protection and Conservation of environment – need, issues and importance in global and local contexts
- Policies for protecting and conserving environment
- Measures for environmental conservation : Management of Natural Resources, Bio-diversity
- Environmental Education: Integration of environmental concerns in school curriculum
- Strategies for sensitizing learners towards protection of environment and its conservation

Unit 5 : Life-Skill Education

- Meaning, Concept and Importance
- Ten core life-skills recommended by WHO
- Strategies for developing individual life-skills at different levels (elementary and secondary)
- Role of teacher in facilitating the development of life-skills
- Role of Community in promoting learners' life-skills

Sessional Work : Each student-teacher is required to submit two assignments selecting one from each group given below:

Group I :

- Observation and reporting on fulfillment of RTE provisions in any school.
- Identification of iniquitous treatment observed in classroom and school situations and preparation of report.
- Assessment of quality of education in any school as per the organizational/academic indicators

Group II :

- Analysis of any one textbook with regard to incorporation of environmental concerns.
- Preparation of a report on community action and practices in promoting life-skills among the young mass.
- Observation and reporting on violation of child rights in any locality.

Suggested Reading :

Glasser, W. (1990). *The quality school: Managing students without coercion*. New York: Perennial Library.

Government of India (1992). *Report of core group on value orientation to education*. New Delhi: Planning Commission, Government of India.

Kaur, B. (2006). *Teaching peace, conflict and pride*. New Delhi: Penguin Books.

Kumar, Arvind (2003). *Environmental challenges of the 21st century*. New Delhi: APH Publishing Corporation.

Kumar, Krishna (1996). *Learning from conflict*. New Delhi: Orient Longman.

Ministry of Law and Justice (2009). *Right to education*. New Delhi: Govt of India.

- NCERT (2005). *National curriculum framework 2005*. New Delhi: NCERT.
- Panneerselvam, A. & Ramkrishnan, M. (1996). *Environmental science education*. New Delhi : Sterling Publishers
- Puri, M. & Abraham. (Eds.) (2004). *Handbook of inclusive education for educators, administrators and planners*. New Delhi: Sage Publications.
- Sharma, R.A. (1998). *Environmental education*. Meerut : Surya Publication
- UNESCO (1990). *Source Book on environmental education for secondary teachers*. Bangkok : UNESCO Principal Regional Office for Asia Pacific
- UNESCO (1994). *Source Book on environmental education for elementary teacher educators*. Bangkok : UNESCO Principal Regional Office for Asia Pacific
- UNESCO (1997). *Trends in environmental education*. Paris : UNESCO
- UNESCO (1998). *Educating for a sustainable future: A transdisciplinary vision for concerted action*. Paris: UNESCO.
- UNESCO (2001). *Learning the way to peace: A teacher's guide to peace education*. Paris: UNESCO.
- UNESCO (2004). *Education for all : The quality imperative*. EFA Global Monitoring Report. Paris: UNESCO.
- UNESCO (2012). *Shaping the education of tomorrow: 2012 Report on the UN decade of education for sustainable development*. Paris: UNESCO.
- Unicef (2000). *Defining quality in education*. New York: Programme Division (Education), Unicef.
- WHO (1991). *Comprehensive school health programme*. New Delhi: World Health Organization Regional Office.
- WHO (1997). *Life skills education for children and adolescents in schools: Introduction and guidelines to facilitate the development and implementation of life skills programmes*. Geneva: Division of Mental Health and Prevention of Substance Abuse, World Health Organization.
- WHO (1999). *Partners in Life Skills Training: conclusions from a united nations inter-agency meeting*. Geneva: World Health Organization.
- WHO (2004). *Skills for health: An important entry-point for health promoting/child-friendly schools*. Geneva: World Health Organization.
- William, J.F. (1997). *The principles of physical education*. Philadelphia: Sunders Co.

FC 5 : Assessing the Learner

Objectives : After completion of this course the student-teacher shall be able to

- *Understand the nature, purpose and types of educational assessment and evaluation.*
- *Develop and use different types of tools and techniques to assess learning in the school situation.*
- *Analyze the trends and issues in learning and learner assessment.*
- *Analyze and interpret results of the assessment.*

Unit 1 : Perspectives on Assessment and Evaluation

- Test, Measurement, Assessment and Evaluation: Meaning and concept; Interrelationship between assessment and evaluation in Education
- Purpose of Evaluation: Placement, Diagnosis of learning difficulties, Monitoring Learning, Providing Feedback, Grading, Promotion, Certification.
- Classification of Assessment based on : Purpose (Placement, Formative, Diagnostic, Summative), Scope (Teacher-made, Standardized), Attribute Measured (Achievement, Attitude, Aptitude etc.), Nature of Information gathered (Qualitative, Quantitative), Mode of Response (Oral, Written and Performance), Nature of Interpretation (Norm-referenced vs. Criterion-referenced), and the Context (Internal, External)(the terms to be explained in brief with suitable examples)
- Continuous and Comprehensive Assessment: Concept, nature, process, implementation strategy.

Unit 2 : Learning Assessment

- Assessment and learning: Assessment of learning; Assessment for learning; Assessment as learning.
- Assessing cognitive, affective and psychomotor dimensions of Learning
- Tools and Techniques of assessment **of** learning: Test and Rating
- Tools and Techniques of assessment **for** learning: Portfolio, Rubric, Self, Peer,
- Tools and Techniques of assessment **as** learning: Peer and Self assessment in collaborative and cooperative learning situations

Unit 3 : Test Construction and Its Use

- Steps of test construction : Planning(focusing on blue print), Preparing, Trying-out and Evaluation
- Principles of Constructing Different types of Test-items (Extended and Restricted response types, Objective types), Objective type and objective-based type
- Characteristics of a good test : Reliability, Validity, Usability (only concept and use)
- Administration of the test and analysis of student performance
- Preparation of report and its further use in enhancing learning

Unit 4 : Trends and Issues in Assessment

- Existing practices: Over emphasis on Summative Assessment (Periodic and common examinations) and marking.
- Issues and Problems : Marking vs. Grading, objectivity vs. subjectivity of test items, Close-ended vs. Open-ended test items
- Policy perspectives and assessment : Recommendations of NPE, 1986 and NCF – 2005
- Emerging practices in assessment – online examination, computer-based examination and open-book examination

Unit 5 : Elementary Statistics

- Measures of Central Tendency : Mean, Median and Mode – their uses and limitations
- Measures of Variability : Range, Average Deviation, Quartile Deviation, Standard Deviation - their uses and limitations
- Correlation: Meaning and uses; Calculation of correlation coefficients by Rank-difference and Product moment methods
- Characteristics of normal curve and its uses
- Standard Scores – Z-Score, T-score and Percentile

Sessional Work: Each student-teacher is required to submit two assignments selecting one from each group given below:

Group I :

- Preparation of 5 objective-based items from each type of test item in any school subject.
- Construction of an achievement test on any topic (carrying 25 marks), its administration and interpretation of the results.
- Development of a two dimensional rubric for assessment of learner performance.

Group II :

- Preparation of a plan for CCA activities for any class during an academic session.
- Appraisal of current evaluation practices in the secondary schools.
- Analysis of examination marks obtained by the students in any subject in a class and preparation of a report for sharing.

Suggested Reading :

- Agarwal, Y.P. (1990). *Statistical methods: concepts, applications and computations*. New Delhi: Sterling Publishers.
- Burke, K. (2005). *How to assess authentic learning* (4th Ed.). Thousand Oaks, CA: Corwin.
- Danielson, C. (2002). *Enhancing student achievement: A framework for school improvement*. Alexandria, VA : Association for Supervision and Curriculum Development
- Garrett, H.E. (1973). *Statistics in psychology and education* (6th ed.). Bombay: Vakils, Feffers & Simon.

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Gronlund, N.E. & Linn, R.L. (2009). *Measurement and assessment in teaching* (10th Edn). Upper Saddle River, NJ: Pearson Education, Inc.

Newman, F.M. (1996). *Authentic achievement : Restructuring schools for intellectual quality*. San Francisco, CA: Jossey-Bass.

Nitko, A.J. (2001). *Educational assessment of students* (3rd ed.). Upper Saddle River, NJ: Prentice Hall.

Popham, W.J. (1993). *Educational evaluation*. Boston: Allyn and Bacon.

Popham, W.J. (1993). *Modern educational measurement*. Englewood Cliffs, N.J.: Prentice Hall.

Popham, W.J. (2010). *Classroom assessment : what teachers need to know* (6th ed.). New York: Prentice Hall.

FC 6 : Planning and Management of School

Objectives : After completion of this course the student-teacher shall be able to

- *Understand the importance of educational planning and school management.*
- *Prepare a list of resources in school for effective school management.*
- *Conduct action research and prepare plan for improvement of classroom learning.*
- *Understand the ways of resolving problems in classroom management.*
- *Analyze different learning resources for effective classroom management.*

Unit 1 : Educational Planning and School Management

- Educational Planning – Concept, Types (National, State and District ; Short Term and Long Term; Macro and Micro)
- School Management – Meaning, Importance and Process
- School Development Plan – Meaning, Nature, Importance and Steps
- State Policies in School Development Plan and School Management(RCFCE Act, 2009 and State Rules,2010)
- Role of Teacher, SMDC and Community in the preparation of School Development Plan and in School Management

Unit 2 : Resource Management

- Infrastructural Resources: Physical space-building and open space, Furniture, Water and Sanitation facilities(separate toilets, garbage disposal, safe drinking water) Barrier-free Environment
- Material Resources: Equipments and Teaching-Learning Materials
- Financial Resources: Grants, Funds generation, Donations, Other sources
- Human Resources: Students, Teachers, Parents, Community and Local Resource Persons - their inter-relationship
- Role of teacher in resource management in schools

Unit 3 : Monitoring and Action Research

- Monitoring – Meaning, importance and scope
- Objectives of monitoring at the elementary and secondary levels
- Mechanisms of monitoring: Structure, personnel and functions; Ongoing monitoring practices and related issues.
- Action Research: Concept, importance and objectives
- Conducting and reporting an action research and its follow up

Unit 4 : Classroom Management

- Effective classroom management for quality learning: Teacher as a facilitator/manager of classroom learning
- Components of Classroom Environment : Learning Situation, Space and Time, Motivation and Discipline
- Management of Learning Situations: Management of Group and Individualized Learning
- Management of Space and Time: Seating Arrangement and Time Allocation
- Management of Motivation and Discipline

Unit 5 : Learning Resources in Classroom Management

- Types of learning resources
 - Print Resources: Textbooks, Workbooks, Self-Instructional Materials, and Supplementary Reading Materials
 - Audio Resources : Educational Radio Broadcast and Audio Programmes, Audio CD
 - Visual Resources -- Non-projected visual resources (Graph, Map, Chart, Poster, Models and Materials); Projected visual resources (Still Visuals such as slide, transparency and film strip; Moving Visuals such as film, video and animation)
- ICT and Multimedia: Media selection, utilization and integration in classroom teaching and learning; Smart Classroom
- Student involvement in the development, collection/ procurement, use and management of learning resources

Sessional Work: Each student-teacher is required to submit two assignments selecting one from each group given below:

Group I :

- Case study of a child with behavioural problems.
- Conduct of an action research project on any classroom problem
- Survey of resources available in a school and the manner of their utilization.

Group II :

- Appraisal of a School Development Plan.
- Preparation of a plan for ensuring quality learning in a class/subject using ICT.
- Assessment of the existing monitoring mechanism at the secondary level in the state and suggestions for improvement.

Suggested Reading :

- Emmer, E.T. & Evertson, C.M. (2008). *Classroom management for middle and high school teachers* (8th ed.). New York: Allyn and Bacon.
- Glasser, William (1993). *The quality school teacher*. New York, NY: Harper Collins Publishers, Inc.
- Glasser, William (1990). *The quality school*. New York, NY: Harper Collins Publishers, Inc.
- Govt. of India (1986/1992). *National policy of education*. New Delhi: Department of Education.
- Govt. of India (1992). *Programme of action 1992*. New Delhi: Department of Education.
- Marsh, C. (2000). *Handbook for beginning teachers* (2nd ed.). Melbourne: Pearson Education.
- MHRD (2008). *Framework for implementation of Rashtriya Madhyamik Shiksha Abhiyan: A scheme for universalisation of access to and improvement of quality at the secondary stage*. New Delhi: Department of School Education and Literacy.
- MHRD (2011). *Sarva Shiksha Abhiyan : Framework for implementation based on the Right of Children to Free and Compulsory Education Act, 2009*. New Delhi: Department of School Education and Literacy.

FC 7 & 8 : Pedagogy of School Subjects

FC 7 & 8 : Pedagogy of Mathematics

Objectives : After completion of this course the student-teacher shall be able to

- Understand the evolution and nature of Mathematics and its importance in the school curriculum in the context of the recent curricular reforms.
- Use various methods and approaches to teaching-learning mathematics especially suitable for the secondary school classes.
- Plan lessons in Mathematics using traditional and constructivist approaches for effective classroom transactions.
- Develop and collect activities and resource materials for their use in enhancing the quality of learning Mathematics at the secondary level.
- Conduct continuous and comprehensive assessment for enhancing the quality of Mathematics learning.
- Understand the concepts in Mathematics included in the secondary school curriculum and make pedagogical analysis of those concepts

Unit 1 : Foundations of Mathematics Education

- *Nature of Mathematics:* Nature and Scope of Mathematics, Nature of Mathematical propositions, Mathematical proof, structure and logic; history of Mathematics with special reference to Indian Mathematics.
- *Learning of Mathematics:* Importance of Mathematics at elementary and secondary level, Objectives of teaching-learning Mathematics at the two levels,
- *Curriculum Reforms in School Mathematics:* Rationale, objectives, principles, designs and materials in Mathematics, recent curricular reforms at the National and State levels (NCF 2005).

Unit 2 : Methods of Teaching-learning Mathematics

- *Learning by Discovery:* Nature and purpose of learning by discovery; guided discovery strategies in teaching Mathematical concepts.
- *Teaching for Understanding Proof:* Proof by induction and deduction; proof by analysis and synthesis,
- *Problem Solving in Mathematics:* Importance of problem solving in Mathematics, Steps of problem solving in Mathematics, Problem Posing, Generating and solving real life problems using Mathematical principles, Situation model for solving word problems.
- *Constructivist approaches:* 5E and ICON Models

Unit 3 : Curricular Activities in Mathematics

- Preparation of Lesson Plans (Traditional, Activity and Constructivist Approaches),
- Activities in Mathematics: Mathematics Quiz, Mathematics Club activities, Mathematics Exhibition, Planning and organizing Mathematics laboratory activities, Mathematics outside the classroom.
- Learning Resources in Mathematics: Types, functions, preparation and utilization of learning resources- Textbook, Models, Calculators and computers, Graphic calculators, community and local resources for teaching-learning Mathematics; Maintaining portfolio in Mathematics

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Unit 4 : Assessment of and for Mathematics Learning

- Assessment of Mathematics learning: Unit test - Designing blue print, item construction, marking schemes,
- Assessment for Mathematics Learning: Assignments, Projects and portfolios in Mathematics, group and collaborative assessment in Mathematics,
- Non-testing methods of assessment of/for mathematics Learning: Observation of learners in action, rating of participation in various Mathematics tasks and activities,
- Diagnosis of difficulties in learning Mathematical concepts, Remediation of the difficulties, enrichment programmes in Mathematics learning -National Mathematics Talent Search, Mathematics Olympiad.
- Planning for continuous assessment of classroom learning in Mathematics.

Unit 5 : Pedagogical Treatment of Contents

Each of the following contents shall be analyzed in terms of the pedagogical treatment indicated in the right cell below.

Content	Aspects of Pedagogical treatment
<ul style="list-style-type: none"> ▪ Number System, Ratio and Proportion ▪ Set, Relations, and Functions ▪ Algebraic equations: Linear, Simultaneous and Quadratic Equations and their graphical solutions, Polynomials ▪ Theory of Indices, Logarithm and Anti-logarithm ▪ Lines and Angles, Axioms, Triangles, Polygons and Circles, Coordinate Geometry, ▪ Trigonometric Ratios and Identities Problems on Height and Distance 	<ul style="list-style-type: none"> ▪ Identification of concepts and sub-concepts ▪ Expected specific learning outcomes ▪ Methods / approaches of teaching-learning ▪ Teaching-learning materials to be used ▪ Expected teacher and students activities ▪ Assessment strategies

Sessional Work : Each student-teacher is required to complete assignments on **any two** of the following :

- Preparation of five lesson plans on any topic from the Mathematics texts of the secondary school following the 5E and/or ICON models.
- Preparation of a unit test on any topic by developing the Blue Print and the test items conforming to the blue print.
- Development of five activities in Mathematics to be used for enrichment programme.
- Diagnosis of learner difficulty in Mathematics and preparation of remedial exercise.
- Designing pedagogical treatment for any topic of Mathematics and designing learning activities.

Suggested Reading :

Cooney, Thomas J. et al. (1975). *Dynamics of teaching secondary school mathematics*. Boston: Houghton Mifflin.

- Driscoll, M.(1999). *Fostering algebraic thinking : a guide for teachers, grades 5-10*. Portsmouth, NH: Heinemann.
- Driscoll, M., Egan, M., Nikula, J., & DiMatteo, R. W. (2007). *Fostering geometric thinking: A guide for teachers, grades 6-10*. Portsmouth, NH: Heinemann.
- Grouws, D.A. (ed) (1992). *Handbook of research on mathematics teaching and learning*. New York: Macmillan Publishing.
- Malone, J. and Taylor, P. (eds) (1993). *Constructivist interpretations of teaching and learning mathematics*. Perth: Curtin University of Technology.
- Marshall, S.P. (1995). *Schemes in problem-solving*. New York: Cambridge University Press.
- Moon, B. & Mayes, A.S. (eds.) (1995). *Teaching and learning in secondary school*. London: Routledge.
- NCERT (1998). *A textbook of content-cum-methodology of teaching mathematics*. New Delhi: NCERT.
- NCERT (2005). *National curriculum framework 2005*. New Delhi : NCERT.
- NCERT (2006). *Position paper : National focus group on teaching mathematics*. New Delhi : NCERT.

FC 7 & 8 : Pedagogy of Science (Physical Science)

Objectives : After completion of this course the student-teacher shall be able to

- *Understand the nature and importance of physical science and its relevance in secondary school curriculum.*
- *Use various methods and approaches to teaching-learning Physical Science suitable for the secondary school classes.*
- *Plan lessons in physical science for effective-classroom transactions.*
- *Develop and collect activities and resource materials for their use in enhancing quality of learning of Physical Science at the secondary level.*
- *Use appropriate tools and techniques for continuous and comprehensive assessment of learning in Physical Science.*
- *Understand the concepts in Physical Science included in the secondary school curriculum and make pedagogical analysis of those concepts*

Unit 1 : Physical Science in School Curriculum

- *Nature of Physical Science: Nature and Scope of Science and Physical Science in particular, Importance of Physical Science in daily life,*
- *Objectives of teaching-learning Physical Science at the secondary school level,*
- *Curriculum Reforms in Science Education: Rationale, objectives, principles, designs and materials in Science, recent curricular reforms at the National and State levels (NCF 2005).*

Unit 2 : Methods of Teaching-learning Science

- *Discovery - Nature and purpose; guided discovery strategies in teaching and learning of concepts in science.*
- *Experimentation- Experimentation under controlled conditions within laboratory and beyond laboratory situation; Process and limitations.*
- *Problem Solving- Problem identification, formulation of hypotheses, collection of data, testing hypotheses and arriving at solution.*
- *Demonstration-cum-Discussion*
- *Project - Situation analysis, selection of the project, preparation of the project proposal, implementation of the project, evaluation and reporting.*
- *E-teaching of science. Using technology for self-learning and collaborative learning of science.*

Unit 3 : Curricular Activities

- *Preparation of Unit Plan; Preparation of Lesson Plans (Traditional, Activity Approach and constructivist approach)*
- *Teaching- Learning Resources - Science Laboratory; Preparation, collection, procurement and use of teaching-learning materials in Science like, Charts, Graph, Bulletin Board, Models; ICT materials like , Filmstrips, Slides, Transparencies, TV, Audio and Video, Computer, and Internet; Community Resources*
- *Learning Activities - Field Trip, Science Club, Science Seminar, Science Exhibition*
- *Assessment - Devices: written, oral, assignment, portfolio*
 - *Planning for continuous assessment of classroom learning*
 - *Remedial teaching in Science*

Unit 4 : Understanding Key Concepts in Physical Science

- Atomic Structure: Atoms and Molecules, Classification of elements,
- Motion, Laws of Motion, Concepts of Work, Energy, Pressure and their measurement,
- Energy: Sources and forms of energy, Renewable and non-renewable energy
- Electricity and Magnetism: Electric Circuit, Potential Difference, Magnetic Field, Lines of Force, Electromagnetic induction.
- Chemical Reactions and Equation
- Heat, Light and Sound

The scope of discussion of the above concepts should be limited to the prescribed Science curriculum for the secondary school level of the state.

Unit 5 : Pedagogical Analysis of Contents

Pedagogical analysis of the basic concepts discussed in Unit IV shall be done with reference to:

- Identification of concepts and sub-concepts,
- Expected specific learning outcomes,
- Methods / approaches of teaching-learning,
- Teaching-learning materials to be used,
- Expected teacher and student activities, and
- Assessment strategies.

Sessional Work : Each student-teacher is required to complete assignments on **any two** of the following:

- Preparation of five lesson plans on any topic of Physical Science included in the Science textbook for the secondary schools.
- Preparation of a unit test on any topic by developing the Blue Print and the test items conforming to the blue print.
- Developing five activities/experiments in Physical Science and prepare a brief report,
- Preparation of a model/tool/device based on any principle of Physical Science included in the course preferably using locally available materials.
- Designing pedagogical treatment for any topic of Physical Science and designing learning activities

Suggested Reading :

- Das, R.C. (2005). *Science teaching in schools*. New Delhi: Sterling Publishers.
- Herr, Norman & Cunningham, James(1994). *Hands-on physics activities with real-life applications*. San Francisco, CA: Jossey-Bass.
- Herr, Norman & Cunningham, James (1999). *Hands-on chemistry activities with real-life applications*. San Francisco, CA: Jossey-Bass.
- Joseph,A. (2011). *Teaching high school science : A sourcebook for the physical sciences*. Harcourt, Brace & World.
- Kumar, A. (2003). *Teaching of physical science*. New Delhi: Anmol Publications.

Mohan, R. (2007). *Innovative science teaching for physical science teachers* (3rd Edn). New Delhi: Prentice Hall.

NCERT (1982). *Teaching of science in secondary schools*. New Delhi: NCERT.

NCERT (2005). *National curriculum framework 2005*. New Delhi: NCERT.

Sharma, R.C. (1998). *Modern science teaching*. New Delhi: Dhanpat Rai and Sons.

UNESCO (1979). *Source book for science teaching*. Paris: UNESCO.

Vaidya, Narendra (1992). *Science teaching for 21st-century*. New Delhi: Deep and Deep.

Zaidi, S.M. (2004). *Modern teaching of science*. New Delhi: Anmol Publications.

FC 7 & 8 : Pedagogy of Science (Biological Science)

Objectives : After completion of this course the student-teacher shall be able to

Understand the nature and importance of Biological Science and its relevance in secondary school curriculum.

Use various methods and approaches to teaching-learning Biological Science suitable for the secondary school classes.

Plan lessons in Biological Science for effective classroom transactions.

Develop and collect activities and resource materials for their use in enhancing quality of learning of Biological Science at the secondary level.

Use appropriate tools and techniques for continuous and comprehensive assessment of learning in Biological Science.

Understand the concepts in Biological Science included in the secondary school curriculum and make pedagogical analysis of those concepts

Unit 1 : Biological Science in School Curriculum

- *Nature of Biological Science:* Nature and Scope of Science and Biological Science in particular, Importance of Biological Science in daily life,
- Objectives of teaching-learning Biological Science at the secondary school level,
- *Curriculum Reforms in Science Education:* Rationale, objectives, principles, designs and materials in Science, recent curricular reforms at the National and State levels (NCF 2005).

Unit 2 : Methods of Teaching-learning Biological Science

- *Observation* – Types, importance in Bio-Science, process, recording of observation
- *Experimentation*- Experimentation under controlled conditions within laboratory and beyond laboratory situation; Process and limitations.
- *Problem Solving*- Problem identification, formulation of hypotheses, collection of data, testing hypotheses and arriving at solution.
- *Demonstration-cum-Discussion*
- *Project* – Situation analysis, selection of the project, preparation of the project proposal, implementation of the project, evaluation and reporting.
- *E-teaching of science.* Using technology for self-learning and collaborative learning of science.

Unit 3 : Curricular Activities

Preparation of Unit Plan; Preparation of Lesson Plans (Traditional, Activity Approach and constructivist approach)

Teaching-Learning Resources: Science Laboratory; Preparation, collection, procurement and use of teaching-learning materials in Science like, Charts, Graph, Bulletin Board, Models, ICT materials like Filmstrips, Slides, Transparencies, TV, Audio and Video, Computer, and Internet; Natural Resources from immediate environment

Learning Activities - Observing flora and fauna in their natural setting, Science Club, Science Seminar, Preservation of biological specimens for learning and building Biological Museum, Science Exhibition

Assessment: Devices- written, oral, assignment, portfolio

Planning for continuous assessment of classroom learning

Unit 4 : Understanding Key Concepts in Biological Science

- Food, Nutrition and Health,
- Cell : Structure, Components and Functions,
- Diversities in Plants and Animals,
- Natural Resources: Physical Resources,
- Environment: Ecosystem, Ecological system flow of energy, Bio-geochemical cycles in nature, Environmental degradation and pollution,
- Basic Physiological Functions in Plants and Animals: Nutrition, Respiration, Excretion and Reproduction

The scope of discussion of the above concepts should be limited to the prescribed Science curriculum for the secondary school level of the state.

Unit 5 : Pedagogical Analysis of Contents

Pedagogical analysis of the basic concepts discussed in Unit IV shall be done with reference to:

- Identification of concepts and sub-concepts,
- Expected specific learning outcomes,
- Methods / approaches of teaching-learning,
- Teaching-learning materials to be used,
- Expected teacher and students activities, and
- Assessment strategies.

Sessional Work : Each student-teacher is required to complete assignments on **any two** of the following:

- Preparation of five lesson plans on any topic of Biological Science included in the Science textbook for the secondary schools.
- Preparation of a unit test on any topic by developing the Blue Print and the test items conforming to the blue print.
- Developing five activities/experiments in Biological Science and prepare a brief report,
- Collection and preservation of biological specimens from the immediate environment (at least five, selecting minimum two each from preservable plants and animals/insects)

Suggested Reading :

Buffaloe, Neal. & Throneberry, J. B. (1972). *Principles of biology teaching*. New Delhi: Prentice Hall of India.

Herr, Norman (2007) *The Sourcebook for teaching science*. San Francisco, CA: Jossey-Bass.

Kulashrestha, S.P. (2009). *Teaching of biology*. Meerut: R.Lali Book Depot.

Mangal, S.K. & Mangal, S. (2007). *Teaching of biological science*. Meerut: International Publishing House.

Miller, D.F. & Blaydes, G.W.(2011). *Methods and materials for teaching biological sciences*. New York: McGraw Hill.

Sharma, R.C. (1998). *Modern science teaching*. New Delhi: Dhanpat Rai and Sons.

Vaidya, Narendra (1992). *Science teaching for 21st century*. New Delhi: Deep and Deep.

Zaidi, S.M. (2004). *Modern teaching of life sciences*. New Delhi: Anmol Publications.

FC 7 & 8 : Pedagogy of Social Science (Geography)

Objectives : After completion of this course the student-teacher shall be able to

- *Understand the importance of teaching and learning of Geography at the secondary level.*
- *Use appropriate teaching methods and strategies while facilitating learning of Geography.*
- *Develop lesson plans for effective teaching and learning of Geography*
- *Prepare, collect and procure resource materials including suitable teaching aids and use them effectively in the classroom*
- *Develop appropriate tools and techniques for comprehensive assessment of learning in Geography.*
- *Understand the concepts in Geography included in the secondary school curriculum and make pedagogical analysis of those concepts.*

Unit 1 : Geography in School Curriculum

- Meaning, nature and scope of Geography
- Importance of Geography in school curriculum at elementary and secondary levels
- Correlation of Geography with other school subjects
- Objectives of teaching- learning Geography at the secondary school level

Unit 2 : Methods and Approaches to Teaching-learning Geography

- Emerging Curricular trends in Geography as per NCF-2005
- Constructivist approach to Teaching – Learning Geography
- Methods of teaching – learning Geography:
 - Lecture-cum-discussion
 - Observation
 - Discovery
 - Problem-solving
 - Project Method

(To be discussed in terms of meaning, process, merits and limitations)

Unit 3 : Learning Resources in Geography

- Preparation, collection, procurement and use of teaching-learning materials like Maps, Globe, Charts, Graphs, Bulletin board, Models
- ICT in Learning of Geography – Film strips, Slides, transparencies T.V., Video, computer, internet
- Map reading and map preparation
- Geography Laboratory and Resource Room
- Use of community resources

Unit 4 : Curricular Activities

- Preparation of unit plans
- Preparation of lesson plans - Traditional, Activity and Constructivist approaches (ICON and 5E model)
- Activities in geography – field trip, Geography club, exhibition
- Assessment
 - Evaluation devices-written, oral, assignment, project work, Portfolio
 - Planning for continuous assessment of classroom learning in Geography.
- Remedial Teaching in Geography

Unit 5 : Pedagogical Treatment of Contents

Each of the following contents shall be analyzed in terms of the pedagogical treatment indicated in the right cell below:

Content	Aspects of Pedagogical treatment
<ul style="list-style-type: none"> ▪ Latitudes & Longitudes ▪ Rotation & Revolution ▪ Agents of denudation ▪ Physical division of India ▪ Climate and vegetation ▪ Natural resources ▪ Social and economic resources ▪ Conservation of Forests and wild life. 	<ul style="list-style-type: none"> ▪ Identification of concepts and sub-concepts ▪ Expected specific learning outcomes ▪ Methods / approaches of teaching-learning ▪ Teaching-learning materials to be used ▪ Expected teacher and student activities ▪ Assessment strategies

Sessional Work : Each student-teacher is required to complete assignments on **any two** of the following:

- Identifying the learning difficulties in any topic and prepare remedial programme
- Preparation of no cost and low cost teaching-learning materials on any two topics.
- Content analysis of a selected topic
- Preparation of a blue print and test items of an achievement test in geography for any secondary class.

Suggested Reading :

Arora, K.L. (1976). *The Teaching of geography*. Jullandhar: Parakash Brothers,.

Broadman, David (1985). *New directions in geography education*. London: Fehur Press.

Dhamija, Neelam (1993). *Multimedia approaches in teaching social studies*. New Delhi: Human Publishing House,.

Graves, N.G. (1982). *New source books for geography teaching*. Longman

Hall, David (1976). *Geography teacher*. London: Unwin Education Books,.

Huckle, J. (1983). *Geographical educational reflection and action*. London: Oxford University Press.

Morrey, D.C. (1972). *Basic geography*. London: Hien Manns Education Books.

Smith, Margaret (2002). *Teaching geography in secondary schools : A reader*. London: Taylor & Francis.

UNESCO (1965). *Source book for geography teaching*. London: Longman.

Verma, O.P. (1984). *Geography teaching*. New Delhi: Sterling Publication.

Walford Rex (1981). *Signposts for geography teaching*. London: Longman.

FC 7 & 8 : Pedagogy of Social Science (History and Political Science)

Objectives : After completion of this course the student-teacher shall be able to

- *understand the meaning, scope and importance of History and Political Science*
- *develop the skill and competence to formulate specific learning outcomes for different History and Political Science lessons*
- *know the different methods and skills of teaching History and Political Science for transacting the contents effectively.*
- *develop time sense and prepare / utilize timeline for effecting teaching of History*
- *prepare Unit Plans and Lesson Plans in History and Political science*
- *develop diagnostic achievement test, administer them and analyse the results for providing feedback*
- *make pedagogical treatment of contents in History and Political Science*

Unit 1 : Concept, Objectives and Values of Teaching History and Political Science

- Meaning, Nature and Scope of History and Political Science
- Values of teaching History and Political Science
- Recommendations of NCF – 2005 on teaching of History and Political Science
- Correlation of History and Political Science with other school subjects
- Objectives of teaching History and Political Science at elementary and secondary levels
- Formulation of specific learning outcomes in History and Political Science Lessons

Unit 2 : Methods and Approaches to Teaching-Learning History and Political Science

- Story-telling
- Narration-cum-discussion
- Dramatization
- Source Method
- Project method
- Teaching History using monuments
- Field Trips

Unit 3 : Development of Resource Materials

- Curriculum as resource material
- Approaches to curriculum in History – Bio-graphical, Chronological and Concentric
- Development of teaching-learning materials – Maps, Atlas, Globes, Charts, Graphs, Models, Film strips, T.V. Video, OHP, and Computer
- Timeline – Concept, Aspects, Type and Use

Unit 4 : Transactional Strategies

- Preparation of unit plans
- Preparation of lesson plans (Traditional and Activity approach)
- Activities in history and political science
 - Visit to Historical Places
 - Group Discussion and Debate
 - Maintenance of Portfolio

- Assessment
 - Evaluation devices-written, oral, practice Assignment, project work, Portfolio
 - Planning for continuous assessment of classroom learning in History and Political science.
 - Remedial Teaching in History and Political science.

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Unit 5 : Pedagogical Analysis of Contents

Content	Aspects of Pedagogical treatment
<p>History</p> <ul style="list-style-type: none"> ▪ Rise of the British power in India ▪ The Great Indian Revolt of 1857 ▪ Socio-religions movements in 19th Century ▪ India's struggle for freedom, American War of Independence ▪ French Revolution ▪ First World War and Second World War <p>Political Science</p> <ul style="list-style-type: none"> ▪ Salient features of Indian Constitution ▪ Fundamental Rights, ▪ Legislative Assembly and its functions ▪ Powers of Prime Minister ▪ Governor and President ▪ Functions of Parliament; High Court and Supreme Court – Structure and Functions ▪ Role of National Human Rights Commission 	<p>Pedagogical analysis of the units with reference to:</p> <ul style="list-style-type: none"> - Identification of concepts and sub-concepts - Expected specific Learning outcomes - Methods/approaches of teaching-learning - Teaching-learning materials to be used - Expected teacher and students activities - Assessment strategies (Formative)

Sessional Work : Each student-teacher is required to complete assignments on **any two** of the following:

- Identifying the learning difficulties in any topic and prepare remedial programme
- Preparation of no cost and low cost teaching aids on any two topics.
- Content analysis of a selected topic
- Preparation of a blue print and test items of an achievement test in History/Political Science for any secondary class.

Suggested Reading :

Burton W.H. (1972). *Principles of history teaching*, London: Methuen.

Carretero, Mario, & Voss, James F. (Eds.) (1994). *Cognitive and instructional processes in history and the social sciences*. Hillsdale: Lawrence Erlbaum Associate.

Chaudhary, K.P. (1975). *The effective teaching of history in India*. New Delhi: NCERT.

Choudhury, K.P. (1975). *The effective teaching of history in India*. New Delhi : NCERT

Drake, Frederick D. & Lynn, R. Nelson (2005). *Engagement in teaching history: Theory and practices for middle and secondary teachers*. Columbus, OH: Pearson.

Ghate, V.D. (1956). *Teaching of history*. Bombay: Oxford University Press.

Gunnin, Dennis (1978). *The teaching of history*. Goom Helm Ltd. London,

James, T. H., Arthur, J. and Hunt, M. (2001). *Learning to teach history in the secondary school: A companion to school experience*. London: Routledge Falme.

Kochhar, S.K.(1970). *Teaching of political science*. New Delhi: Sterling Publishers

FC 7 & 8 : Pedagogy of Language (Odia)

Objectives : After completion of this course the student-teacher shall be able to

- *Understand the importance and place of Odia as mother tongue in school curriculum.*
- *Develop the strategies to address the problems of Odia language acquisition in multilingual context.*
- *Use various strategies for facilitating the acquisition of language skills in Odia.*
- *Decide appropriate pedagogic approaches to transact different types of lessons in Odia.*
- *Prepare appropriate tools for comprehensive assessment of learning in Odia.*
- *Understand the Odia linguistics and its relevance in teaching learning Odia.*
- *Plan appropriate pedagogic treatment of the prescribed textual contents (in Odia) of classes IX and X.*

Unit 1 : Odia as Mother Tongue in School Curriculum

- Importance of mother tongue in the life and education of an individual
- Place of Odia as mother tongue in school curriculum in Odisha (both at elementary and secondary levels) in the context of language policy recommended by NPE, 1986 (three language formula)
- Objectives of teaching-learning Odia at elementary and secondary levels
- Inter-dependence of language skills in Odia
- Strategies for facilitating acquisition of four-fold language skills in Odia

Unit 2 : Pedagogic Approaches to Teaching-Learning Odia

- Psychology of language learning and acquisition with reference to Odia as mother tongue.
- Problems and issues related to acquisition of Odia language in multi-lingual context
- Traditional versus modern methods of teaching-learning Odia.
- Different approaches and strategies to the teaching-learning of :
 - Odia prose (detailed and non-detailed)
 - Odia poetry
 - Odia composition (through Rubric)
 - Odia grammar
 - Strategies for enrichment of Odia vocabulary (word formation and spelling)
 - Strategies for developing creative writing skills

Unit 3 : Curricular Activities in Odia

- Preparation of Unit Plan
- Preparation of Lesson Plan following constructivist approach (5E and ICON Models)
- Learning resources and planning learning activities
- Learning assessment in Odia : Assessing comprehension and expression skills; preparation of objective-based and objective-type test items
- Portfolio Assessment in Odia
- Comprehensive Assessment of Learning in Odia
- Planning remedial measures

Unit 4 : Relevance of Linguistics in Odia Language Acquisition

- Elements of Language – sound, vocabulary and structure
 - Odia Dhvani (Sound) – Types and manner of articulation
 - Odia Vocabulary – Types (Tatsama, Tadbhava, Deshaja, Baideshika), Word formation process and principles (use of Upasarga, Anusarga, Pratyaya, Samasa and Sandhi), Semantics (Lexical and Contextual)
 - Odia Syntax – Processes and Principles
- Use of Linguistics in effective teaching-learning of Odia language

Unit 5 : Pedagogical Treatment of Content

Each of the following contents shall be analyzed in terms of the pedagogical treatment indicated in the right cell below.

Content	Aspects of Pedagogical treatment
<ul style="list-style-type: none"> ▪ Poems – Matira Manisha, Gopa Prayana, Hey Mora Kalama, Padma ▪ Prose Pieces – Jatiya Jivana, Prakruta Bandhu, Odia Sahitya Katha ▪ Grammar – Karaka, Bibhakti, Samasa <p>(Pieces to be selected from Class X Text and indicated)</p>	<ul style="list-style-type: none"> ▪ Identification of language items (new vocabulary, expression and grammar components) ▪ Identification of scope in the content to be presented for facilitating learning language skills ▪ Formulation of learning objectives ▪ Selection of methods and approaches / strategies ▪ Preparation of teaching-learning materials ▪ Designing of learning activities ▪ Planning teacher and student activities for effective interaction ▪ Assessment strategies (focusing formative)

Sessional Work:

Each student-teacher is required to complete assignments on **any two** of the following :

- Preparation of Five Lesson Plans on the topics from the prescribed text following 5E and ICON Models (at least two plans in each model)
- Preparation of a blue print on any topic from the prescribed text and development of test items in conformity with the blue print.
- Diagnosis of spelling problems among the learners and development of remedial materials
- Preparation of a Rubric for developing an essay in Odia

Suggested Reading :

Dhal, G.B. (1972). *English uchharana siksha*. Cuttack : Friends Publisher.

Dhal, G.B. (1974). *Dhwani bijanana*. Bhubaneswar : Odisha Rajya Pathya Pustaka Pranayana Sanstha.

Mohanty, B. (1970). *Odia bhasara utpati O Parma bikasha*. Cuttack : Friends Publishers.

- Mohanty, J., Barik, N. & Khandai, U. (1983). *Odia sikshadana paddhati*. Cuttack : Nalanda.
- Mohapatra, D. (1976). *Odia Dhvani tattwa O sabdha sambhar*. Cuttack : Grantha Mandir.
- Mohapatra, N. & Das, S. (1943). *Sarbasara vyakarana*. Cuttack : New Student's Store
- Nayak, B. (1974). *Matrubhasa Sikshadana paddhati*. Bhubaneswar : Odisha Rajya Pathya Pustaka Pranayana Sanstha.
- Padhee, B. (1972). *Odia bhasara rupa tattwa*. Berhampur : Pustak Mandir.
- Rout, P.C. (1986). *Matrubhasa sikshadana paddhati*. Jaipur : Saraswati Printers
- Sahoo, B. (1975). *Bhasa bigyanara rupa rekha*. Cuttack : Paramarathi Printers
- Saranghi, N. (2001). *Bruhat odia vyakarana*. Cuttack : Satyanarayan Book Store
- Tripathy, K.B. (1977). *Odia bhasa tattwa O lipira krama bikash*. Bhubaneswar : Odisha Rajya Pathya Pustaka Pranayana Sanstha.

FC 7 & 8 : Pedagogy of Language (English)

Objectives : After completion of this course the student-teacher shall be able to

- *Analyze the issues relating to importance and place of English in school curriculum, acquisition of skills in English, realization of aims and objectives of learning English and language policy as conceived in NPE, 1986 and NCF - 2005*
- *Use various methods, approaches and strategies for teaching-learning English and transact various types of lesson plans covering all aspects of English language following different approaches*
- *Develop test items to assess learning in English and provide feedback as well as prepare enrichment materials*
- *Use the understanding of phonetics for facilitating students' speaking in English*
- *Plan appropriate pedagogical treatment of the prescribed contents for effective classroom transaction*

Unit 1 : English in School Curriculum

- Language policy in India with reference to NPE, 1986 and NCF - 2005
- Importance of English language in India in historical perspectives
- Place of English as a compulsory subject in school curriculum (both at elementary and secondary levels)
- Objectives of learning English at elementary and secondary levels
- English language skills - their components, independence and interdependence

Unit 2 : Acquisition of Second Language (English) : Methods, Approaches and Strategies

- Psychology of language acquisition and language learning
- Acquisition of English language : problems and issues with reference to multi-lingual context
- Importance of language context and input-rich classroom environment for acquisition of English language
- Understanding of different methods and strategies : Translation Method, Direct Method, Bi-lingual Method, Communicative Approach including Silent Approach, Suggestopaedia, skill-based activity, Group Learning

Unit 3 : Transaction of Contents and Learning Assessment in English

- Transaction of Prose (detailed and non-detailed), poetry, grammar and composition lessons - Approaches, Methods and Strategies
- Preparation of Unit Plan
- Preparation of Lesson Plan following communicative approach and constructivist approach (5E and ICON Models)
- Strategies for enrichment of vocabulary in English : word formation skill and spelling
- Teaching-learning materials in English : Types and Uses : preparation of low cost no-cost teaching-learning materials in English
- Assessment in English : assessing skills in English; framing different types of objective-based test items (Extended Response Type, Restrictive Response

Type and Objective Type), Portfolio assessment in English, Continuous Assessment of Learners performance in English within and beyond classroom situations

Unit 4 : English Language and its Articulation

- Characteristics of language
- Analysis of English language with reference to its substance, form and context
- Sounds of English language : Consonants and Vowels (Pure and Diphthongs)
- Articulation of sounds in English – appropriate use of organs of speech
- Patterns of stress and intonation in English language
- Kinds of errors made by the Odia speaking learners while speaking English and their remediation

Unit 5 : Pedagogical Treatment of Content

Each of the following contents shall be analyzed in terms of the pedagogical treatment indicated in the right cell below.

Content	Aspects of Pedagogical treatment
<ul style="list-style-type: none"> ▪ Any six topics (3 prose pieces and 3 poems) from the prescribed text for Classes IX and X by BSE, Odisha ▪ Parts of Speech ▪ Time and Tense ▪ Change of Voice ▪ Direct and Indirect speech ▪ Sentence Pattern ▪ Translation and Composition (Writing letter and essay, noting, reporting) 	<ul style="list-style-type: none"> ▪ Identification of language items (new vocabulary, expression and grammar components) ▪ Identification of scope in the content to be presented for facilitating learning of language skills ▪ Specification of learning objectives ▪ Selection of methods and approaches / strategies ▪ Preparation of teaching-learning materials ▪ Designing of learning activities ▪ Planning teacher and student activities for effective interaction ▪ Assessment strategies (focusing formative)

Sessional Work :

Each student-teacher is required to complete assignments on **any two** of the following :

- Preparation of 5 Lesson Plans on the topics from the prescribed text following SE and ICON Model (at least two plans in each model)
- Preparation of a blue print on any topic from the prescribed text and development of test items in conformity with the blue print
- Diagnosis of learner difficulty in speaking English and preparation of the remedial exercise
- Designing of pedagogical treatment for any topic from the prescribed text in terms of identification of language items (new vocabulary, expression and grammar components) and designing of learning activities

(3)

Suggested Reading :

- Bansal, R.K. (1971). *An outline of general phonetics*. Bombay : Oxford University Press
- Bansal, R.K. and Harrisson, J.B. (1972). *Spoken english for India*. Madras : Orient Longman
- Baruah, T.C. (1984). *The english teachers handbook*. New Delhi : Sterling Publishers
- Billows, F.N. (1961). *The techniques of language teaching*. London : William Heffer and Sons.
- Carrol, J.B. (1972). *Systems and structures of english*. London: Oxford University Press.
- Das, B.K. et al. (2009). *An introduction to professional english and soft skills*. New Delhi : Cambridge University Press
- Dodson, C.J. (1963). *The bilingual method*. London : Pitman Publishing.
- Frisby, A.W. (1970). *Teaching english: notes and comments*. London: ELBS.
- Gokak, V.K. (1963). *English in India: Its present and future*. New Delhi: Asia Publishing House.
- Harish David, P. (1969). *Testing english as second language*. New Jersey : McGraw Hill
- Hornby, A.S. (1962). *The teaching of structural words and sentence patterns*. London: Oxford University Press.
- Jones, Daniel (1967). *An outline of english phonetics*. London : William Heffer and Sons
- Kohli, A.L. (1970). *Techniques of teaching english*. Jalandhar : Dhanpat Rai and Sons.
- Krishna Swamy, N. and Sri Raman, T. (1994). *English teaching in India*. Madras : T.R. Publication.
- Palmer, H.E. (1980). *Grammar of spoken english*. Cambridge: Heffer.
- Prabhu, N.S. (1989). *Second language pedagogy*. New Delhi : Oxford University Press
- Sachdeva, M.S. (1973). *A new approach to teaching of english in India*. Ludhiana : Prakash Brothers
- Saraswati, V. (2004). *English language teaching*. New Delhi : Orient Longman
- Sharma, A.K. (1985). *Aspects of english language teaching in India*. New Delhi : Bharat Book Depot.
- Sinha, S.P. (1978). *English in India*. New Delhi : Janaki Prakashan

Group B: Practical Courses (PrC)

The practical courses constitute the following:

PrC 1: School Experience Programme (in practising schools)

- Internship Activities
- School-based Activities

PrC 2: Workshop Activities (in Teacher Education Institutions)

PrC 1 : School Experience Programme

a) Internship Activities

Internship activities in teaching shall be organized in three phases namely pre-internship, internship, post-internship.

Pre-internship Activities (*Two weeks duration*)

Pre-internship activities meant for preparation for teaching shall include the following:

- orientation of the student-teachers
- a sharing meeting of the teachers and Head Masters of the practising schools in the institution and finalization of the *modus operandi* of internship programme
- demonstration lessons by the faculty members concerned followed by post demonstration discussion
- criticism lessons by the student-teachers (one lesson by each student-teacher in any one of the methods opted) under the supervision of concerned method teachers attended by all student-teachers of the method concerned
- placement of student-teachers in practising schools for internship activities.

Internship activities (*four to six weeks duration*)

Internship activities shall include the following:

- Preparation of lesson plans by the student-teachers in their concerned method subjects
- Delivery of practice lessons under the supervision of the faculty members. Each student-teacher shall deliver 40 lessons (20 lessons in each method subject) excluding the criticism lesson. Out of the 40 lessons, 30% (12nos.) shall be delivered in the upper primary classes (Classes VI to VIII) and the remaining lessons in the secondary classes (Classes IX and X).
- Observation of five peer practising lessons and recording of the performance of the peer student teachers with authentication by concerned supervisors.
- Feedback session in the Teacher Education Institution concerned after each spell of ten-day of practice teaching to be attended by all student-teachers for sharing their experiences.

Post-internship activities

- Overall sharing of student-teachers' internship experiences in the institution.
- Suggestions and feedback from the teachers and Heads of the practising schools for further improvement of the internship activities

- (9)
- Exhibition/demonstration of innovative and creative work done by the student-teachers during internship.
 - Student-teachers' feedback on overall organization of internship programme by the institution for future action.

b) School-based Activities

During school experience programme, apart from delivering practice teaching lessons, each student-teacher is required to perform the following activities of the school like the regular teachers of that school. In a true sense, each student-teacher is to act and perform his/her duties in the school just like a regular teacher during the school experience programme in order to acquaint himself/herself with different aspects of school functioning.

i) Participation Activities and Documentation

- attendance in school assembly
- participation in campus cleaning and beautification activities
- taking arrangement classes when required
- organization and participation in literary and recreational activities of the school
- participation in school games and sports activities
- organization and participation of science exhibition, science fair, science club/nature study club/eco club activities
- organization of awareness campaign on HIV/AIDS, blood donation, conservation and protection of environment etc.
- organization of blood donation camps

ii) Report Preparation

- preparation of report on Annual sports and celebration of important occasions and events
- Preparation of report on maintenance of registers and records by the school
- preparation of scheme of lessons in any subject for any class
- preparation of report on SMDC meeting in the school
- preparation of school related sessional work assigned under each foundation paper

Performance of each student-teacher in the above mentioned activities is required to be authenticated by the head of the school or the teacher authorized by the head of the school.

PrC 2 : Workshop Activities

- At each Teacher Education Institution the workshops shall be organized on different themes related to sessional work under each foundation paper in order to enable the student-teachers to get hand-on experiences and acquaint them with the design, tools and techniques.
- Minimum 80% attendance on the part of each student-teacher in the workshop is mandatory.
- The performance of each student-teacher in the workshop shall be assessed both internally and externally.

Group C: Add on Courses (AC)

AC1 :Language Proficiency

Objectives : After completion of this course the student-teacher shall be able to

- *Improve his / her proficiency in 'reading', 'writing', 'thinking', and 'communicating' in the language of instruction.*
- *Develop an interest for reading*
- *Improve his / her ability to understand instruction*

Unit 1 : **Engaging with Narrative and Descriptive Accounts**

The selected texts could include stories or chapters from fiction, dramatic incidents, vivid descriptive accounts, or even well produced comic strip stories.

Suggested Activities :

- Reading for comprehending and visualizing the account (individual + group reading and discussion/explanation)
- Re-telling the account - in one's own words/from different points of view (taking turns in a smaller group)
- Narrating/describing a related account from one's life experience (in front of a smaller group)
- Discussion of characters and situations - sharing interpretations and points of view (in a smaller group)
- Actively writing to be based on the text e.g. Summary of a scene, extrapolation of story, converting a situation into a dialogue etc. (individual task)

Unit 2 : **Engaging with popular subject-based expository writing**

The selected texts could include articles, biographical writing, or extracts from popular nonfiction writing, with themes that are drawn from the subject areas of the student-teachers (various sciences, mathematics, history, geography, literature/language pieces) For this unit, the student teachers should work in groups divided according to their subjects, within which different texts could be read by different pairs of student teachers.

Suggested Activities:

- Reading to extract overall meaning, information, subject knowledge (guided reading in pairs and simple note making)
- Identifying major concepts and ideas involved and making notes on these in some schematic form - flow diagram, tree diagram, mind map etc (guided working in pairs)
- Explaining the gist of the text/topic to others (in the larger subject group)
- Attending to writing style, subject-specific vocabulary and 'perspective' or 'reference frame' in which different topics are presented - this will vary across subjects and texts, and requires some interpretative skills for 'placing' the context of each text (group discussion and sharing)
- Writing a review or a summary of the text, with comments and opinions (individual task)

Unit 3 : **Engaging with Journalistic Writing**

The selected texts would include newspaper or magazine articles on topics of contemporary interest. Student-teachers can be grouped randomly for this unit.

Suggested Activities:

- Using reading strategies such as scanning, skimming and in-depth reading for extracting information – as appropriate for initial reading of articles (guided individual task)
- Analysis of structure of the article, identifying sub-headings, key words, sequencing of ideas, use of concrete details, illustrations and/or statistical representations etc (guided working in pairs)
- Critical reading for attending to 'framing' of the article, point(s) of view presented, possible biases or slants (small group discussion)
- Researching and writing articles on topics of local interest (working to produce a local interest magazine)

Unit 4 : Engaging with subject-related reference books

For this unit, the student-teachers should work in groups divided according to their subjects. Within these groups, pairs of student-teachers would make a choice of a specific topic in their subject area which they could research from a set of available reference books. The focus of this unit is as much the learning of effective processes of reference research and its presentation, as the actual reading of the reference books themselves.

Sequence of Activities :

- a) Selecting the topic for research and articulating some guiding questions
- b) Searching and locating relevant reference books (could be from a school library or the Institute library)
- c) Scanning, skimming and extracting relevant information from the books by making notes
- d) Collating notes and organizing information under various sub-headings
- e) Planning a presentation – with display and oral components
- f) Making presentations to whole subject group and fielding questions

Unit 5 : Engaging with educational writing

Selected texts here could be drawn from the wide range of popular educational writings in the form of well-written essays, extracts or chapters from authors who deal with themes from education, schooling, teaching or learning. The writings selected should present a definite point of view or argument about some aspect of the above themes. Student- teachers can be grouped randomly for this unit.

Suggested Activities:

- Reading for discerning the theme(s) and argument of the essay (guided reading – individually or in pairs)
- Analyzing the structure of the argument: identifying main ideas, understanding topic sentences of paragraphs, supporting ideas and examples, terms used as connectors and transitions (guided small group discussion)
- Discussion of the theme, sharing responses and points of view (small group discussion)
- Writing a response paper (individually or in pairs)
- Presentations of selected papers, questions and answers (large group)

AC 2 : ICT Skill Development

Objectives : After completion of this course the student-teacher shall be able to

- *Describe a computer system*
- *Describe the working of a computer*
- *Open the windows operating system*
- *Use word processing package*
- *Appreciate the use of the word processing package in education*
- *Acquire the skill of trouble-shooting whenever there are problems in the working of computer*

Unit 1 : Computer Fundamentals

- What is computer - Basic anatomy of computer,
- Characteristics of Computer - Speed, Storage, Accuracy, Versatile, Automation, Diligence;
- Basic structure of Computer - input, output, process; Memory - ROM, RAM, CD ROM,,
- Input Devices - Keyboards, Mouse, Touch Screen, MICR, Light Pen, Joy Stick, Digitizer, Scanner;
- Output Devices - VDU, Printers, laser, Inkjet;
- Data storage devices - Hard disk, Compact disk, Optical disk, Pen drive and other devices

Unit 2 : Operating System

- Operating system - Characteristics, Types, Relative Merit and Demerits;
- Computer Networks, Distributed Processing; Installation of Software,
- MS Windows- Introduction to Windows, Control Panel, File Manager, Accessories Write, Paintbrush, Calendar, Card File, MS-Office, Overview.

Unit 3 : MS-Word

- Starting MS-Word: Creating a Documents; Opening a Documents; Saving a Document; Editing, Formatting Text, Viewing Documents;
- Formatting Documents - Line spacing, Paragraph spacing, Setting Tab, Indenting Text, Aligning Text; Adding Header and Footers; Numbering Pages; Inserting a Table;
- Proofing a Documents - Spell-check, automatic Spell33 check, Auto Text, Auto Correct;
- Printing a Documents; Mail Merge; Simple Trouble shooting;
- Use of MS-WORD in Education.

Unit 4 :

MS Power Point

- Getting started with power point , the power point screen, power point views : Normal power point Dialog box , Out line, slide, slide sorter, slide show.
- Creating a power point Presentation slide using
 - The Auto content wizard
 - Design Template
 - Blank presentation
- Creating a New Slide, adding a presentation, Text Colours, Fill-colors, Fill Effects, Line Effects; Line-styles, Object Effects, Word Art, Animation Effects
- Using Transitions: Slide Transition: Effect speed, Sound drop down Box, Giving an On-Screen Presentation, Navigation during presentation, Pausing the presentation.

Unit 5 :

Spread Sheet – MS Excel

- Introduction to MS- Excel; Starting MS-Excel, Opening a Worksheet, Saving a Worksheet;
- Spreadsheet operations – Entering Numbers, text, Dates & Time, formulas;
- Editing the Worksheet – Deleting Cells, Rows, Columns; Inserting Cells, Rows, Columns, Printing a Worksheet;
- Formulas and Function – Entering Formulas, Absolute and Relative Reference of a Cell, Mixed Referencing, operating in Formulas, Using Text, Data and Time in a Formula, Array and Named Ranges; Preparing a Resume
- Creating Data base - Database Objects: Tables, Queries, Forms, Reports, Pages, Macros, Modules, Creating a Database using database wizard, Tables, Records and Fields. Creating table in design view. Entering records to the table, moving around a table.

AC3 :Creative and Productive Work (CPW)

Each student-teacher has to choose any one of the CPW areas which are essentially practical oriented with basic minimum theoretical treatment to support the understanding of the practical skills.

AC 3 (a) Commercial Art

Objectives : After completion of this course the student-teacher shall be able to

- *Prepare report on different Art forms*
- *Develop the skill of preparing two dimensional and three dimensional teaching aids*
- *Collect materials from the locality and prepare low cost and no cost teaching aids*
- *Organize exhibitions of different Art forms*

Unit 1 : Visual Art :

Creative in visual art, Characteristics of child art and folk art, Distinctive characteristics of Fine Art, The scope and utility of developing skills of the school children in visual art. Development of a workable plan for implementation of utility based art activities in the School.

Unit 2 : Survey of the natural resources:

Survey of the natural resources around the dwelling place which can be utilized for preparing useful artistic material collection of specimens of useful artistic material preparation in the locality. Submission of report along with specimens.

Unit 3 : Reproduction of Art:

Reproductions of child art, tribal art, handicrafts, landscape, flowers, vegetables, trees, birds, animals, book illustrations comprising of human figures book covers, newspapers advertisements, invitation and greeting cards are to be collected at least six of each kind and submitted in the form of an album with proper captions.

Drawing vegetables, fruits, flowers, animals, birds, human figures and houses in simple form on the black board.

Unit 4 : Finished drawing:

Outlines of flowers, birds, animals and human figures. Multicolored design with geometrical forms and floral motif suitable for textile designs, book cover, invitation and greeting cards. Technique of preparing designs for line block and halftone printing.

Unit 5 : Pencil and colored layouts:

Preparing pencil and colored layouts for book cover designs, invitation and greeting card designs and poster designs. Practice in simple and decorative lettering suitable for block designs and signboards. Mounting pictures and organizing exhibitions.

AC 3 (b) Performing Art (Indian Music)

Objectives : After completion of this course the student-teacher shall be able to

- Know about the basic structure of music and appreciate the values of music in life to know different Ragas, Alankaras and Talas
- Develop the skill of singing Bhajan and Patriotic song on any Raga
- Know about different terminologies like Nadas, Swar etc.
- Organize musical programme

Unit 1 : Study of following Alankars

- Sa, Re, Ga, Ma, Pa, Dha, Ni, Sa
- Saga, Rema, Gapa, Madha
- Sarega, Regama, Gamapa, Mapadha
- Saregama, Regamapa

Unit 2 : Prescribed Ragas

- Bhupali, Kaphi, Khamaj, Desh, Aroha, Abroha, Pakad and one ChhotakKhayal, Banteje in each Raga and Alap, Boltan and Tan in any two Ragas.

Unit 3 : Bhajan and Patriotic Song

- Bhajan and Patriotic Song based on any Raga with Hindustani style of singing.

Unit 4 : Talas

- Tritala, Jhamptal, Ektal, Rupak, Dadara and Kaharba. Knowledge of Thekas of the prescribed Talas.

Unit 5 : Basic Terminologies of Music:

- Dhwanis, Nada, Swar, Sruti, Saptak, Sangit, Raga, Thaata, Vadi, Samvadi, Anuvadi, Barjit, Khayal, Dhrupad, Dhamar, Purbang, Uttarang, Alap, Boltan, Tan, Chorus, Bhajan, Classical Music, Light Music, Light Classical Music, Odishi Music

AC 3 (c) : Fruit and Vegetable Preservation

Objectives : After completion of this course the student-teacher shall be able to

- *Develop economic values through fruit and vegetable preservation*
- *Gain knowledge about fruit preservation industry*
- *Gain knowledge about different type of preservatives for different type of preservation*
- *Have appropriate use of fruits and vegetables by avoiding wastage and spoilage*

Unit 1 : Need and importance

The need for fruit preservation industry-its relationship with horticultural development, developing and modernizing. Fruit preservation as a home scale industry and as an educative craft, causes of wastage and spoilage and remedies.

Unit 2 : Raw materials

- Raw materials for fruits and vegetables preservation-kinds, varieties and types of useful raw materials, geographical and seasonal distribution, quantity produced.

Unit 3 : Medicinal Values

- Medicinal value, suitability for processing and preservation, effects of processing on the food value of preserved fruits and vegetables and possible industrial applications

Unit 4 : Packing materials and Principles of preservation

- Various types of tin and glass containers and packing materials, general principles of preservation-selecting, grading, washing, bunching, peeling and pitting of fruits and vegetables-pasteurization and sterilization.

Unit 5 : Methods of preservation

Methods of preservation: Heating, drying, salting freezing, use of oil and vinegars, use of sugar, use of chemicals by fermentation and by the production of vinegar.

Practical (To be conducted along with the theoretical discussions of the above subject units).

- a) Acquaintance with learning and the operation of various equipments improvising cheap equipments for purpose of processing.
- b) Selecting, grading, washing, peeling and pitting of fruits for processing and preservation.
- c) Preparation of sugar syrups and brine testing syrups strength.
- d) Bottling of fruits, Preparation and preservation of fruit juices, squashes cordials and syrups of locally available fruits.
- e) Canning - canning of fruits in syrups, vegetables in brine and curried vegetables.
- f) Preparation of jams, jellies, marmalades and cordials.
- g) Preparation of oil and vinegar pickles, chutneys, ketchups and sources.
- h) Preparation of fruit vinegars.
- i) Drying and dehydration-sun drying and dehydration by the home made drier.

AC 3 (d) Physical, Health and Hygiene Education

Objectives : After completion of this course the student-teacher shall be able to

- *Develop the skills and competencies of health and hygiene*
- *Know about personal and institutional cleanliness and sanitation*
- *Be acquainted with the basic skills of safety and first aid*
- *Acquire the skill of various indoor and outdoor sports events including Yogas and Asanas*
- *Organize sports and athletic activities of the institute*

Unit 1 : Cleanliness and Safe Drinking Water

- Personal cleanliness, Cleanliness of the classroom and other places in the campus of the institution. Cleanliness of the environment,
- Arrangements of safe drinking water and sanitation in the institution.

Unit 2 : First Aid

- Basic skills of first aid related to Artificial Respiration,
- Different types of bandages and their application, transportation of injured and sick persons, use of splint.
- Common injuries like drawing, snake bite, burn, sunstroke, wounds, bleeding, and their first aid and care.

Unit 3 : Track and Field Events

- Conduct of events of a Track and Field Meet, duties of the officials for a Track and Field Meet, rules of track events like 100 meter race, 200 meter race, 400 meter race, 800 meter race, 1500 meter race, 3000 meter race and 5000 meter race.
- Rules for organizing field events like running broad Jump, Running High Jump, Putting the Shot, Throwing Discus, Throwing Javelin.

Unit 4 : Organization of various indoor and outdoor games

- Organization of indoor games like Chess, carom, table tennis etc.,
- Organisation of outdoor games like Kabadi, Kho-Kho, Volley Ball, Throw Ball, lawn tennis, badminton etc.

Unit 5 : Drill, Yogas and Gymastics

- Mass Drill and Marching, Yoga & Asanas , gymnastic (Simple Floor Exercise)

Practicals as appropriate to the topics detailed above shall be conducted simultaneously along with the discussion of the theoretical points.

AC 3 (e) Spinning and Weaving

Objectives : After completion of this course the student-teacher shall be able to

- *Develop a sense of appreciation towards Khadi*
- *Know the processing of cotton for Khadi*
- *Master the skill of spinning and weaving*
- *Develop proficiency in spinning yarn of counts (10-25)*
- *Organize exhibitions of different spinning and weaving materials*

Unit 1 : Khadi

- Preparation of Khadi and weave Khadi

Unit 2 : Picking and Processing of cotton

- Knowledge and practice in picking cotton and its processing - such as learning, spinning, processing, carding and silver making.

Unit 3 : Spinning yarn of counts

- Proficiency in spinning yarn of counts.

Unit 4 : Twisting preparing 'Toni'

- Practice in twisting preparing 'Toni' reeling simple designing and all the processes of weaving on handloom.

Unit 5 : Estimating yarn and price

- Ability to estimate the weight of yarn, count of yarn, strength of yarn and finished product of yarn. Ability to estimate the price of a 'Than' prepared.

Practicals as appropriate to the topics detailed above shall be conducted simultaneously along with the discussion of the theoretical aspects.

AC 3 (f) Tailoring

Objectives : After completion of this course the student-teacher shall be able to

- Know different parts of the sewing machine and its maintenance
- Develop skills in stitching, mending and cutting the garments
- Develop aesthetic and creative abilities through tailoring
- Design different garments
- Organize exhibition in various type of designed garments

There will be no separate theoretical instruction. Such theory as is needed for practical work may be given during practical work.

Unit 1 : Machine Parts and Their Maintenance

- Study of the various parts of the sewing machine. Process of oiling and cleaning the parts.

Unit 2 : Different kinds of stitches

- Use of the different kinds of stitches, such as hem, back stitch, French seam, button-hole stitch.

Unit 3 : Cutting and Finishing

- Cutting and finishing on machine of the following garments: Jumpers, Kamis, Junghiyas, banyans, Kurtas, shirts, half pants, blouses, frocks. different stitches, such as hem, back stitch, French seam, button holes.

Unit 4 : Mending of clothes

- Mending of clothes as round holes, rectangular holes, torn slits.

Unit 5 : Measurement for various garments

- Measure for various garments and calculation of the quantity of materials of different width.

AC 3 (g) Woodwork

Objectives : After completion of this course the student-teacher shall be able to

- Know different types of tools and their safe uses
- Develop skills in preparing wooden products like pointer, duster, blackboard, chair, table stool etc.
- Know different types of timbers for preparing various finished products and process of protecting wooden materials

Unit 1 : Concept of woodwork

- Need, importance and scope of woodwork.

Unit 2 : Workshop Activities

- Workshop discipline, safety, precaution, safe handling of tools, first aid;
- definition of push and pull saw, fret saw and saw sharpening.

Unit 3 : Tools for Woodwork

- Types of timber and its structure, selection of the size of wood to be planed first, face side marks: setting of marking gauges. Martice gauge and testing with try square. Different types of chisels, mallets and hammers. Hardware uses in the wood section

Unit 4 : Timber and its protection

- Timbers – their sources and uses, structure of trunk properties, Insects and wood protection. Natural and artificial seasoning, commercial firm of timber, plywood, particle boards, glues.

Unit 5 : Quantifying timber and wood finishes

- Calculation of measures of timber, Preparing, cutting. Wood finishing: Polish, varnish and paints.
- In course of discussion of the above theoretical aspects and related practical work, the following articles (at least three by each student-teacher) need to be prepared as a part of practical work:
 - Hangers, wall-brackets, book-shelves, tools, bench, desk, chair, black-board, pointer, duster, stationery rack, round table, pet table. Wood turning work such as cups, plates, roller, table lamp and other ornamental designs.

- (9)
- Exhibition/demonstration of innovative and creative work done by the student-teachers during internship.
 - Student-teachers' feedback on overall organization of internship programme by the institution for future action.

b) School-based Activities

During school experience programme, apart from delivering practice teaching lessons, each student-teacher is required to perform the following activities of the school like the regular teachers of that school. In a true sense, each student-teacher is to act and perform his/her duties in the school just like a regular teacher during the school experience programme in order to acquaint himself/herself with different aspects of school functioning.

i) Participation Activities and Documentation

- attendance in school assembly
- participation in campus cleaning and beautification activities
- taking arrangement classes when required
- organization and participation in literary and recreational activities of the school
- participation in school games and sports activities
- organization and participation of science exhibition, science fair, science club/nature study club/eco club activities
- organization of awareness campaign on HIV/AIDS, blood donation, conservation and protection of environment etc.
- organization of blood donation camps

ii) Report Preparation

- preparation of report on Annual sports and celebration of important occasions and events
- Preparation of report on maintenance of registers and records by the school
- preparation of scheme of lessons in any subject for any class
- preparation of report on SMDC meeting in the school
- preparation of school related sessional work assigned under each foundation paper

Performance of each student-teacher in the above mentioned activities is required to be authenticated by the head of the school or the teacher authorized by the head of the school.

PrC 2 : Workshop Activities

- At each Teacher Education Institution the workshops shall be organized on different themes related to sessional work under each foundation paper in order to enable the student-teachers to get hand-on experiences and acquaint them with the design, tools and techniques.
- Minimum 80% attendance on the part of each student-teacher in the workshop is mandatory.
- The performance of each student-teacher in the workshop shall be assessed both internally and externally.

ASSESSMENT CRITERIA

The performance of the student-teachers in the courses under the Groups A, B and C shall be assessed both internally and externally as detailed below:

Group A :

- The performance of each student-teacher in each Foundation Paper shall be assessed internally out of 20 marks and externally out of 80 marks.
- Sessional work in respect of each student-teacher shall be assessed internally by the faculty member concerned both on the process and the final product (Report) and shall be awarded marks out of 10 on each such work (20 marks for two sessional work in each Foundation paper). The detailed criteria of assessment of sessional work shall be spelt out by a Committee of faculty members chosen by the Head of the Institution.
- The term-end performance of a student-teacher on each Foundation Paper shall be assessed externally out of 80 marks in the final / term-end examination, conducted by the University concerned.

Group B :

- The performance of each student-teacher in internship activity in teaching in each method subject shall be assessed internally out of 40 marks and externally out of 60 marks. The sessional assessment is to be done by the method teacher concerned. The term-end assessment of performance during final teaching shall be done jointly by the internal and the external examiners, so appointed by the University concerned.
- The performance of a student-teacher on the school-based activities shall be assessed internally out of 60 marks and externally out of 40 marks. The sessional assessment is to be done by a committee of faculty members in consideration of the documents and the reports prepared by each student-teacher. The term-end assessment of performance on school-based activities shall be done jointly by internal and external examiners, so appointed by the University concerned.
- The performance of the student-teachers on the workshop activities i.e. level of participation, extent of knowledge about the activity and the material prepared / produced thereof during the workshop shall be assessed internally out of 60 marks and externally out of 40 marks. Both sessional and term-end assessment of workshop-based activities shall be done in the manner as specified above for assessment of school-based activities.

Group C :

- The performance of each student-teacher in the add-on courses namely, Language Proficiency, ICT Skill Development and any one Creative and Productive Work (CPW) shall be internally assessed separately by the faculty member (s) concerned and Grades shall be awarded. A 3-point scale (A : Excellent, B : Good, C : Manageable) shall be used for assigning grades and the same shall be reflected in the final mark-sheet of each student-teacher.

EXAMINATION AND CERTIFICATION

1. The respective Universities shall conduct the term-end examination for B.Ed. (Secondary) Course every year. The time of examination shall be decided by the Examination Committee of the Universities concerned.
2. The examination shall be conducted by means of Written Test (for Theory Papers) and test of Practicals (for Practical Papers) and shall be in accordance with such instruction as may be decided and issued by the Universities concerned.
3. The examinations shall be opened to the candidates who have been duly selected as per the Government approved admission guidelines and admitted in different Teacher Training Institutions of the state.
4. The candidates who have prosecuted their Courses of Study by attending both theory and practical classes thereby securing not less than 75% attendance in each paper (60% on production of Medical Certificate) and have successfully completed the required number of practical assignments (Sessional work, Practice Teaching, Workshop Activity and School-based Activity) duly assessed internally and fulfilling all other required conditions in order to be declared eligible for the term-end examination by the Head of the Teacher Training Institutions concerned.
5. If the candidates who are sent up for admission to the examination by satisfying all the conditions as laid down in the Sl. No. 4 Supra but could not appear or having appeared have failed at the examination, shall be allowed to appear as ex-regular candidates.
6. The medium of instruction and examination in all the theory papers except the Pedagogy of Language in Odia under FC 7 & 8 shall be English.
7. Minimum percentage of pass mark in each Theory paper shall be 40 and in each practical paper 50 of the total marks of that paper. In aggregate, a candidate has to secure 45% marks in order to be declared pass, subject to condition that he / she must have passed in individual theory and practical papers.
8. Each candidate has to secure minimum pass mark in each course (Theory and Practical) in sessional work and term-end examination separately. If a candidate fails to secure the minimum pass mark in sessional work he / she cannot be eligible to fill up the form to sit in the term-end final examination.
9. The performance of the candidates in Add on Courses under Paper PrC3 shall be awarded Grades and the same shall be reflected in the final mark-sheet of the candidate.
10. At the final qualifying examination, award of Division shall be considered out of 1200 marks. In award of division, marks obtained by a candidate, both in theory and practical papers, shall be taken into consideration. Division shall be awarded as per the following :

First Class	:	720 marks and above (60% and above)
Second Class	:	540 to 719 marks (45% and above but below 60%)
11. A candidate securing minimum pass mark (540) in aggregate, but fails to secure 40% marks in any theory course (subject to maximum two theory courses) in the term-end examination shall be allowed two consecutive chances to pass in those courses. The marks secured by the candidates in sessional work in those courses shall also be retained for the two consecutive chances only.
12. All other conditions for conduct of examination and declaration of result shall be determined by the concerned University as per their regulations and statute.