COURSES OF STUDIES

For

Four Years Integrated BA/BSc B.Ed.

(CBCS System)

Session 2021-2022 onwards

**SCHOOL OF EDUCATION
GANGADHAR MEHER UNIVERSITY,
AMRUTA VIHAR, SAMBALPUR, ODISHA-768004**

Programme Objectives of Integrated BA/BSc B.Ed.

➢ To develop disciplinary area-specific skills, generic skills and attributes of the pupil-teachers.

➢ Demonstrate core values such as
   1) Commitment to the profession or job requirements; values that guide the profession; and seeking out new challenges/assignments that improve student learning;
   2) Honouring diversity and ensuring inclusion by treating all students and colleagues with respect and dignity, showing respect for and sensitivity to gender, cultural and religious difference; and challenging prejudice, biases and intolerance in the workplace etc.;
   3) Ethical integrity which involves maintaining ethical standards; resisting pressure in decision making; displays honest behaviour; and not abusing power/authority.

➢ Core competencies such as
   1) Communication skills required to articulate thoughts and ideas clearly/effectively using oral and written communication skills, and to present information and explanations in a well-structures and logical manner;
   2) Working effectively with students and their parents which involves interacting with students, parents and community members to know the students, their family and social and cultural contexts; determining learning readiness/prerequisites required by students; and Identifying their learning difficulties; and
   3) Drive for achieving improved student learning outcomes.

➢ Demonstrate professional/technical knowledge (What prospective teachers are expected to know) of the physical, social and intellectual development and characteristics of students and how these may affect learning; undertaking research into how students learn and the implications for teaching; and identifying teaching strategies that are responsive to the learning strengths and needs of students from diverse linguistic, cultural, religious and socioeconomic backgrounds.

➢ Demonstrate knowledge and understanding of: strategies for differentiating teaching to meet the specific learning needs of students across the full range of abilities; teaching strategies that support participation and learning of differently-abled students; both school education and teacher education-related subjects, including concepts, substance and structure of the content, and approaches to organising content into an effective learning sequence.

➢ Demonstrate knowledge required to design learning sequences and lesson plans; implement teaching strategies using ICT to improve teaching-learning process; set explicit, challenging and achievable learning goals for all students; and plan and implement well-structured learning and teaching programmes or lesson sequences that engage students and promote learning.

➢ Demonstrate professional competencies/practice (What prospective teachers will be able to do) that are required to select and use relevant teaching strategies to develop

knowledge, skills, problem solving and critical and creative thinking; select and/or create and use a range of resources, including ICT, to engage students in their learning; use effective verbal and non-verbal communication strategies to support student understanding, participation, engagement and achievement; evaluate teaching and learning programmes using evidence, including feedback from students and student assessment data, to inform planning; establish and implement inclusive and positive interactions to engage and support student participation in classroom activities.

➤ Demonstrate professional competencies/practice that are required to manage classroom activities by establishing and maintaining orderly and workable routines to create an environment where student time is spent on learning tasks; manage challenging behaviour by establishing and negotiating clear expectations with students and address discipline issues promptly, fairly and respectfully; ensure students' well-being and safety within school by implementing school and/or system, curriculum and legislative requirements; and incorporate strategies to promote the safe, responsible and ethical use of ICT in learning and teaching.

➤ Demonstrate professional competencies/practice that are required to develop, select and use informal and formal, diagnostic, formative and summative assessment strategies to assess student learning; provide timely, effective and appropriate feedback to students about their achievement relative to their learning goals; participate in assessment moderation activities to support consistent and comparable assessment of student learning; use student assessment data to analyse and evaluate student understanding of subject/content, identifying interventions and modifying teaching practice; and report on student achievement, making use of accurate and reliable records.

➤ Demonstrate competencies and actions required for keeping oneself professionally engaged and participate in learning to update knowledge and practice, targeted to professional needs and school and/or system priorities; contribute to collegial discussions and apply constructive feedback from colleagues to improve professional knowledge and practice; meet codes of ethics and conduct established by the education systems and schools; establish and maintain respectful collaborative relationships with parents/guardians regarding their children's learning and well- being and anticipate in professional and community networks and forums to broaden knowledge and improve practice.

Programme Structure at a Glance

Integrated BA/BSc B.Ed. programme comprising four years, will be divided into eight (08) semesters, 82 credits and 2000 marks

Year	Semester	Credit	Marks
1st	I	08	200
	II	08	200
2nd	III	04	100
	IV	04	100
3rd	V	08	200
	VI	08	200
4th	VII	20	550
	VIII	22	450
Total		**82**	**2000**

Semester Wise Detailed Course Structure and Distributions of Marks

The detail of title of papers, credit hours, division of marks etc. of all the papers of all semesters is given below.

SEMESTER-I

Papers		Distribution of Marks			Total Marks	Credit Hours
Papers No.	Title	Theory		Practical		
		Mid Term	End Term			
PE-1	Basics in Education	15	60	25	100	04
PE-2	Childhood and Growing Up	15	60	25	100	04
Total					**200**	**08**

SEMESTER-II

Papers		Distribution of Marks			Total Marks	Credit
Papers No.	Title	Theory		Practical		
		Mid Term	End Term			
PE-3	Learning and Teaching	15	60	25	100	04
PE-4	Assessment and Research	15	60	25	100	04
Total					**200**	**08**

SEMESTER-III

Papers		Distribution of Marks			Total Marks	Credit
Papers No.	Title	Theory		Practical		
		Mid Term	End Term			
PE-5	Knowledge and Curriculum	15	60	25	100	04
Total					100	04

SEMESTER-IV

Papers		Distribution of Marks			Total Marks	Credit
Papers No.	Title	Theory		Practical		
		Mid Term	End Term			
CPS-1	Language across curriculum	10	40	-------	50	02
EPC-1	Learning to Function as a Teacher	Internal Practicum		50	50	02
Total					100	04

SEMESTER-V

Papers		Distribution of Marks			Total Marks	Credit
Papers No.	Title	Theory		Practical		
		Mid Term	End Term			
CPS-2 (Part-I)	**Pedagogy of** Odia, English, Mathematics Biology	15	60	25	100	04
CPS-3 (Part-I)	**Pedagogy of** Social Science and Physical Science	15	60	25	100	04
Total					200	08

SEMESTER-VI

Papers		Distribution of Marks			Total Marks	Credit
Papers No.	Title	Theory		Practical		
		Mid Term	End Term			
CPS-2 (Part-II)	**Pedagogy of** Odia, English, Mathematics and Biology	15	60	25	100	04
CPS-3 (Part-II)	**Pedagogy of** Social Science and Physical Science	15	60	25	100	04
Total					200	08

SEMESTER-VII

Papers		Distribution of Marks		Total Marks	Credit
Papers No.	Title	Theory	Practical		
EPC-4	Understanding the Self	--------	50	50	02
EPC-5	Arts in Education	--------	50	50	02
EPC 6	ICT Practicum	--------	50	50	02
EPC-7	Reading and Reflecting on Texts	---------	50	50	02
EF-1	School Exposure(Multicultural Placement)	-----------	50	50	02
EF 2	School Internship	----------	250	250	10
Total		Nil	500	500	20

SEMESTER-VIII

Papers		Distribution of Marks			Total Marks	Credit
Papers No.	Title	Theory		Practical		
		Mid Term	End Term			
PE-6	Creating an Inclusive Classroom	15	60	25	100	04
PE-7	Educational Planning, Management and Leadership	15	60	25	100	04
PE-8	Schooling , Socialization and Identity	15	60	25	100	04
PE-9	Vision for Indian education	15	60	25	100	04
EPC 2	Understanding ICT and Its Application	10	40	--------	50	02
EPC 3	Health, Yoga and Physical Education	10	40	--------	50	02
EF 3	Working with Community	-------	-------	-------	Grade	02
Total					**500+Grade**	**22**

SEMESTER-I

PE 1: Basics in Education

Credit-04

Course Outcomes

On completion of this course, the pupil-teacher shall

A. State the narrow and broad meaning of education
B. Identify various modes and processes of education
C. Compare meaning, nature and process of education from oriental and western perspectives.
D. Explain various bases of education - philosophical, sociological and psychological foundationsof education.
E. Critically evaluate and apply thoughts of Indian and Western philosophers in educational context.
F. Justify how education is a social sub system which is influenced by social change processes like urbanization,culture and privatization.
G. Elaborate the linkage between education and various dimensions of national development.

Unit-I Education: Meaning, Process and Purpose   (Number of classes-10)
- Education: Derivational meaning, broad and narrow meanings, Oriental and westernviews on education
- Nature and process: Bipolar, tri-polar and multi-polar; Schooling and life-longprocess
- Modes: Formal, Informal and Non formal
- Purpose: individual and social of aims of education; aims of education as per the SEC (1952-53), Education Commission (1964-66) and NPE,1986

Unit-II Foundation of Education   (Number of classes-10)
- Philosophical: Meaning and relationship between philosophy and education; Impactof philosophy on aims, curriculum, school organisation and pedagogy with reference to Idealism, Naturalism and Pragmatism.
- Sociological: Meaning and relationship between sociology and education; Impact of sociology on aims, curriculum, school organisation and pedagogy.
- Psychological: Meaning and relationship between psychology and education; Impact of psychology on aims, curriculum, school organisation and pedagogy.
- Educational thoughts of Mahatama Gandhi, Rabindranath Tagore, Swami Vivekananda and Shri Aurobindo with reference to aims ,curriculum and methods of teaching.
- Educational thoughts of Rousseau, Plato and Dewey with reference to aims, curriculum and methods of teaching.

Unit-III Education, Society and Culture   (Number of classes-10)
- Social system: education as sub system of social system and their inter relationship. Social change; Meaning, dimensions and role of education for social change
- Education and Modernization: Meaning, nature and   role of education for modernization
- Education and culture: Meaning and role of education for conservation, transmission and promotion of culture. Education as process of acculturation and enculturation
- Privatization in education: Concept and types; Its impact on education

Unit-IV: Education and National Development   (Number of classe-10)
- Education for National Development: Dimensions and indicators; role of education for National Development
- Education for development of Human Resources: indicators of quality human resource and role of education
- Education for inclusive development: Meaning and dimensions (social, economic, cultural, political, technological and spatial), Strategies for promoting inclusion, Role of education.

Mode of Transaction:
- Lecture cum discussion method
- Question and answering,
- Computer assisted learning'
- Activity based,

Practicum   (Number of Classes-08)
Each student will carry out any one of the activities, submit a report and face viva exam to be conducted by both internal and external examiners.

- Prepare a report on the aims of education as recommended by educational thinkers for comparative analysis.
- Prepare and present a seminar paper on the aims of education as per the report of Secondary EducationCommission, Indian Education Commission, and National Policy on Education (1986).
- Prepare a term paper on philosophical, sociological and psychologicalfoundations on school curriculum, organization, textbook, methods of teaching.
- Prepare a report to compare similarity and differences between educational ideas of Indian and Western philosophers.
- Prepare a field study report of a nearby locality on criteria of inclusive development and suggest strategy for it.
- Any other task/assignment given by the institution

Suggested Readings

Agrawal, A (1995). *Dismantling the Divide Between Indigenous and Scientific Knowledge: Development and Change*, 26:413-39.

Ant Weiler, C. (1998). *Low Knowledge and Local Knowing: An Anthropological Analysis of Contested "Cultural Products" in the Context of Development*.Anthropos, 93:46-94.

Butchvarov, P. (1970), *The Concept of Knowledge*, Evanston, Illinois: North Western University Press.

Chomsky, N. (1986). *Knowledge of Language*, Prager, New York.

Datta, D.M. (1972). *Six ways of Knowing*. Calcutta University Press, Calcutta.

Dewey, J. (1956). *The Child and the Curriculum and School and Society*, University of Chicago Press, Chicago, Illinois: U.S.A.

Dewey, J. (1997) *Experience and Education*, Touchstone: New York.

Dewey, J. (1997).My Pedagogic Creed', in D.J. Flinders and S.J. Thorton(eds.) *The Curriculum Studies Reader*, Routledge: New York.

Keddie, N.(1971). *Classroom Knowledge*, in. M.F.D Young.

Krishna Murthy, J. (1947).*On Education*, Orient Longman: New Delhi.

Kumar, Krishna (1996*). Learning From Conflict*, Orient Longman: New Delhi.

Margaret, K.T. (1999). *The open Classroom*, Orient Longman: New Delhi.

NCERT (2014). *Basics in Education*: Textbook for B.Ed Course. NCERT, NewDelhi**.**

Peters, R.S. (1967). *The Concept of Education*, Routledge: UK.

Phenix, P.H. (1964). *Realms of Meaning*. McGraw-Hill: New York.

Prema, Clarke. (2001). *Teaching & Learning: The Culture of Pedagogy*, SagePublication: New Delhi.

Steven, H. C. (1970). *The Philosophical Foundation of Education,* Harper & Row Publishers: New York.

Sykes, Marjorie. (1998). *The Story of NaiTaleem*,NaiTaleemSamiti: Wardha.

Taneja, V.R (1978). Educational Thought and Practice. Sterling Publishers PvtLimited, New Delhi.

Thapan. M. (1991). *Life at School: An Ethnographic Study*. Oxford University Press,Delhi.

PE 2: Childhood and Growing Up

Credit-04

Course Outcomes

On completion of this course, the pupil-teacher shall

A. Describe the concept of growth and development of human child and explains the underlying general principles of growth and development;
B. Apply the knowledge of the principles of child development to study children.
C. State meaning, nature and various intelligence test with theory.
D. Explain the meaning, theory and assessment of personality.
E. Specify the contexts and factors influencing development.
F. Elaborate the developmental characteristics, contextual needs and tasks during adolescence and the role of school and teachers in addressing the challenges during this period of development.
G. Describe different views of Erickson,Piaget and Vygotsky on development
H. Explain the concept of individual differences and its implications
I. Define and explain life skills education and role of teachercounsellor and parents in dealing with adolescence problems.

Unit 1: Learner as a Developing Individual   (Number of classes-10)

- Growth and Development: concept, principles and characteristics
- Factors Influencing Development: heredity, environment, nutrition, child rearing practices, socioeconomic status, sibling and peers.
- Individual differences: Concept and Types (intra and inter); Educational Implications of individual differences.
- Motivation-concepts, types and techniques of motivation.

Unit 2: Developmental characteristics and needs during adolescence
                                         (Number of classes-10)

- Growth and development during adolescence: Characteristics during early and late adolescence – Physical, Social, Cognitive, Emotional and Moral: Challenges of adolescence
- Erickson's views on psychosocial development and Kohlberg's views on moral development
- Cognitive and language development: cognitive developmental stages of Piaget; Vygotsky's theory of concept and language development; language development theory of Chomsky

Unit-3: Intelligence and personality   (Number of classes-10)

- Intelligence: Nature and meaning. Measurement of Intelligence-Concept of I.Q, Verbal and Non-verbal (One test from each category to be discussed)
- Theory of multiple intelligence (Howard Gardner)

- Structure of Intellect (Guilford)
- Personality: Nature and meaning. Determinants of Personality
- Trait-theory of Personality (Allport), Psycho analytic theory of personality (Freud)
- Assessment of Personality-subjective, objective and projective techniques

Unit 4: Understanding Adolescence education   (Number of classes-10)
- Adolescence Education: Concept, Nature and Importance
- Life skills education for adolescents: Meaning, importance, different life skills and strategy for developing life skills
- Relevance of Socio-Cultural diversity (family, school environment, community, peer group) and life experiences/learners' voice- their relevance to adolescence education
- Role of teacher, counsellor and parents in dealing adolescence problems

Mode of Transaction:
- Lecture cum discussion method
- Question and answer method
- Computer assisted learning
- Activity based learning

Practicum   (Number of classes-08)

Each student will carry out any one of the activities, submit a report and face viva examination to be conducted by both internal and external examiners.

1. Prepare an observation schedule and observe the behaviour of the child in school setting.
2. Prepare and submit a paper on ten adolescent children living in different contexts (rural areas, urban slum, dalit household, urban area, and working/street people) and compare their lifestyle and problems.
3. View any two movies out of the following: 1. Smile Pinky (2008), 2. Born into Brothels (2014), 3. Salaam Bombay (1988), 4. Slumdog Millionaire (2009), 5. Gippie (2013) and 6.Mehek (2007).Submit a paper on their content, picturization, characters and messages in the context of issues and concerns of childhood/adolescence
4. Administration and interpretation of any psychological test relating to intelligence and personality and prepare a report on it
5. Any other task/assignment given by the institution.

Suggested Readings

Cole, M and Cole, S (1989). *The Development of Children,* Scientific American Books, New York

Hurlok, E.B. (2003). *Child Growth and Development*, Tata McGraw Hill

Kakkar, S (1978). *The Inner World: A Psychoanalytic Study of Childhood and Societyin India*. Oxford University Press, New Delhi

NCERT: Module on Adolescence Education

Mishra, A (2007), Everyday Life in a Slum in Delhi. In D.K. Behera (Ed. *Childhoodin South Asia*. New Delhi: Pearson Education India

Nambissan, G.B. (2009). *Exclusion and Discrimination in Schools: Experiences ofDalit Children*. Indian Institute of Dalit Students and UNICEF

Parry, J. (2005). Changing Childhoods in Industrial Chattisgarh. In R. Chopra and P.Jeffery (Eds), *Educational regimes in Contemporary India*. Sage

Piaget, J. (1997). Development and Learning. In M. Gauvain and M. Cole (Eds), *Readings on the development of children*. New York: WH Freeman and Company

Saraswathi, T.S. (1999). Adult-Child Continuity in India: Is Adolescence a myth or anemerging reality? In T.S. Saraswathi (Ed), *Culture, Socialisation and Human Development: Theory, research and applications in India*. New Delhi. Sage

Sharma, N (2011). *Understanding Adolescence*, MBT India

Singh, A (Ed), (2015). *Human Development: A Life Span Approach*. Orient Black Swan, Delhi

Woolfolk, A. (2008). Educational Psychology. Pearson Education.

SEMESTER-II
PE 3: Learning and Teaching

Credit-04

Course Outcomes

On completion of this course, the pupil-teacher shall

A. Elaborate different learning needs of the learners with regard to abilities, learning styles, socio-cultural differences, language, and learningdifficulties.
B. Define learning as transmission and reception Vs. learning as construction
C. Evaluate different theoretical perspectives of learning including the constructivist perspective
D. State nature and strategy of meaningful and concept learning, role of multiple intelligence in it.

Unit I: Understanding Learning   (Number of classes-10)
- Meaning, nature; learning as process and as outcome
- Understanding characteristics of learning styles of students at elementary and secondary levels; matching the teaching style with the learning style.
- Different viewpoints on learning and their classroom implications: Behaviourist (Skinner), Cognitivist (Piaget), Humanist (Roger) and Constructivist (Vygotsky)
- Factors affecting learning: individual differences, conditions of learning and methods.

Unit II: Learning in 'Constructivist' Perspective   (Number of classes -10)
- Learning as 'construction of knowledge' and learning as 'transmission and receptionof knowledge'-differences
- Understanding processes facilitating 'construction of knowledge': Experientiallearning and Reflection, Social mediation, Cognitive negotiability, situated learning and Cognitive apprenticeship, Meta-cognition.
- Facilitative learning environments: teachers' attitudes, expectation- enhancing motivation, positive emotion, self-efficacy, collaborative and self-regulated learning.

Unit III: Meaningful and Concept Learning   (Number of classes-10)
- Meaning, nature and characteristics of meaningful learning, Facilitating meaningful learning in and outside school-strategy and role of teacher
- Learning as meaning making: concept, process, learner as meaning maker-characteristics of the learner; role of inquiry in meaning making
- Concept Learning: Meaning, prototypes and exemplars , concepts and schemas, strategies for teaching concepts

Unit-IV: Teaching for Meaningful and Concept Learning
                                                   (Number of classes-10)
- Nature of teaching: Teaching as Instructing Vs. Teaching as facilitating learning, teaching as empowering learners; Phases and levels of teaching, Modes of teaching learnings: Face to face, distance mode, oral- aural and digital, individualized and group

based

- Teaching skills: communicating, introducing, explaining, using blackboard, questioning, reinforcing, using aids/ICT and managing classroom
- Bruner's models of teaching for meaningful learning-process and implications for classroom instructions.
- Concept attainment model and concept mapping for teaching.

Mode of Transaction:

- Lecture cum discussion method
- Question and answer method
- Computer assisted learning'
- Activity based learning

Practicum   (Number of classes-08)

Suggested Activities

- Draft a report on Teachers' Teaching Style by one-week classroom observation of two teachers.
- Observe a class in a local school for few days and prepare a report highlighting how teachers addressed the learning needs of different learners.
- Prepare concept maps on pedagogy subject, teach in school and write a reflective noteon how it helps learner.
- Interact with few teachers in a nearby school and discuss with them the relevance of training they received with respect to the classroom teaching and submit a report on it.
- Any other task/assignment given by the institution.

Suggested Readings

Bhutt, H. *The dairy of a school teacher*: An Azim Premji University publications, www.arvindguptatoys.com/arvindgupta/diary - school teacher- eng.pdf

Burden, Paul R; Byrd, David. M. (1999). *Methods for Effective Teaching* (SecEdition), Allyn and Bacon.

Carr, D (2005), *Making sense of education: An introduction to the philosophy andtheory of education and teaching*, Routledge.

Delpit, L (2006). *Other people's children, cultural conflict in the classroom.* TheNew press.

Dhar,T.N. (Ed). 1996.*Professional status of Teachers*, NCTE, New Delhi.

Kauchak, D. P and Eggen, P. D (1998). *Learning and Teaching,: Research basedmethods*, Boston: Allyn and Bocan

Ladsen – Billings, G (1995). Toward a theory of culturally relevant pedagogy. *American Educational Research Journal*, 32 (3), 465-491.

Lampert, M. (2001). *Teaching problems and the problems of teaching*. YaleUniversity press.

Mohalik, R. (2010). *In-service Teacher Education*. Mahamaya Publishing House,New Delhi.

NCERT (2005*). National Curriculum Framework,* New Delhi

Olson, D.R. & Bruner, J.S. (1996). "Folk Psychology and Folk Pedagogy". In D.R. Olson & N. Torrance (Eds.). *The Handbook of Education and Human Development* (PP.9-27).Blackwell.

Piaget, J. (1997). "Development and Learning", In M. Gauvain& M. Cole (Eds.), *Reading on the Development of Children*. New York: WH Freeman & Company.

Rogeff, B; Baker-Sennatt, T., Lacasa, P. and Goldsmith, D. (1995). Developmentthrough

participation in socio-cultural activity, *New Directions for child and adolescent development*, 1995 (67), 45-65.

Sethy, R. (2014). *Style and Strategy of In-service Teacher Education*. LAP Publication, Germany

Shulman,L.S. (1986). Those who understand: Knowledge growth in teaching. *Educational Researcher*, 4-14.

Vygotsky, L. (1997). "Interaction between Learning and Development", In M. Gauvain& M. Cole (Eds.) *Reading on the Development of Children*, New York: WH Freeman & Company.

Woolfolk, A. (2008). Educational Psychology. Pearson Education.

PE 4: Assessment and Research

Credit-04

Course Outcomes

On completion of this course, the pupil-teacher shall –

A. Define the nature, purpose and types of assessment.
B. Explain the use of continuous and assessment of learning in the school situation.
C. Evaluate an action research project in terms of its objectives, processes.
D. Evaluate and interpret results of the assessment using elementary statistical methods.

Unit-1: Assessment, Evaluation and Learning   (Number of classes-10)

- Assessment – Meaning
- Classification of Assessment based on Purpose (Placement, Formative, Diagnostic, and Summative), Scope(Teacher-made, Standardized)

- Gathered (Qualitative, Quantitative), Mode of Response (Oral, Written and Performance), Nature of Interpretation (Norm-referenced and Criterion- referenced), and the Context (Internal, External).
- Continuous and Comprehensive Assessment: Meaning, Importance and Scope; Learning and Assessment: Assessment of Learning, Assessment for Learning, and Assessment as Learning; CCA vs CCE

Unit-2: Educational Research   (Number ofclasses-10)

- Meaning, steps and scope of Educational Research
- Types of Research- Fundamental, Applied and Action Research
- Action Research-Importance, characteristics and objectives
- Designing, procedures and steps of conducting action research.
- Tools and Techniques used in conducting action research
- Reporting Action Research-Format and Style

Unit-3 Construction of Test and Use   (Number of classes-10)

- Revised Bloom's Taxonomy (2000) for instructional objectives
- Planning the test: Development of table of specifications (blueprint)
- Preparing the test: principles of preparing test items-objective based items-Extended and Restricted response types, Objective type items (free response type-short answer and completion; fixed response type- matching, forced/alternate choice, multiple choice);

Unit-4 Elementary Statistics   (Number of class-10)

- Measures of Central Tendency: Mean, Median, Mode-their uses and limitations.
- Measures of Variability: Range, Average Deviation, Quartile Deviation, Standard Deviation-their uses and limitations.
- Graphical representation of data
- Standard scores; T score, Z score, percentile and it uses
- Correlation: Meaning and uses, calculation of correlation coefficients by Rank-difference and Product moment method.

Mode of Transaction:
- Lecture cum discussion method
- Question and answer method
- Computer assisted learning'
- Activity based learning

Practicum   (Number of classes-08)

Each student will carry out any one of the activities, submit a report and face viva examination to be conducted by both internal and external examiners.

Suggested Activities
- Preparation of 50 objective-based items, at least 5 from each type of test items in any school subject.
- Construction of an achievement test on any topic (carrying25marks), its administration and interpretation of the results.
- Preparation of a plan for CCA activities for any class during an academic session.
- Conduct an action research on any school/classroom problem he/she encounters and prepare a report
- Prepare and submit a report on current CCA practices in the secondary schools.
- Any other task/assignment given by the institution.

Suggested Readings

Anderson,L.W.(2003).Classroom assessment: Enhancing the quality of teacher decision making. Mahwah,NewJersey: Lawrence ErlbaumAssociates.

Best, J.W., &Kahn,J.V.(1998). *Research in education* (8th ed.). Needham Heights,MA: Allyn and Bacon

Burke,K.(2005).*How to assess authentic learning*(4thEd.).Thousand Oaks,CA: Corwin.

Cooper,D.(2007).*Talkaboutassessment:Strategiesandtoolstoimprovelearning*. Toronto,Ontario: ThomsonNelson.

Danielson,C.(2002).*Enhancing student achievement: A framework for school improvement*. Alexandria, VA:Association for Supervisionand Curriculum Development

Garrett,H.E.(1973).*Statistics in psychology and education*(6th ed.).Bombay:Vakils, Feffers & Simon.

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

pham, W.J. (1993). *Modern educational measurement*.Englewood Cliffs, N.J.: PrenticeHall.

Stiggins,R. (2005).*Student-involved classroom assessment*. (4th ed). Columbus, Ohio: Merrill

SEMESTER-III
PE 5: Knowledge and Curriculum

Credit-04

Course Outcome

On completion of this course, the pupil- teachers shall be able to

A. State concept of knowledge, process and sources of knowing
B. Differentiate teacher centric and learner centric knowledge transmission
C. Describe concept, types of curriculum and differentiate between curriculum framework, curriculum and syllabus
D. Explore the process and principles of curriculum development
E. Analyse the process of curriculum transaction.

Unit-1 Understanding the Nature of Knowledge   (Number of Classes-10)
- Knowledge: Concept and nature and comparison knowledge, skill, knowledge information, reason and belief.
- Types and theories of knowledge
- Knowledge Acquisition: sources and ways of knowing in Indian and Western context

Unit-2 Construction and transmission process of knowledge
(Number of Classes-10)
- Knowledge transmission(teacher-centric) vs Knowledgeconstruction (learner-centric)
- Process of knowing: activity, discovery and dialogue-views of Dewey, Ausubel and Bruner
- Construction of Knowledge: theories of Piaget and Vygotsky; implications for curriculum

Unit-3 Understanding curriculum   (Number of Classes-10)
- Determining epistemological basis of curriculum
- Concept of curriculum (difference between curriculum framework, curriculum, syllabus and textbook)
- Types of curriculum (subject- centered, learner-centered, experience-centered,activity-centered, hidden curriculum and core curriculum)
- Curriculum framework–Concept, principles and coverage; NCF 2005, andNCFTE 2009 –significant recommendations.

Unit-4 Curriculum planning, development and transaction
(Number of Classes-10)
- Determinants of curriculum
- Principles of curriculum development
- Stages of curriculum development (preparation, try out and finalization)
- Transaction: Planning (time, space, manpower, material and scheme of lessons), Preparation of curricular materials and activities (text and support materials, learning activities), conducting classroom transaction (preparation oflesson plans/notes, mode of

transaction, learners' involvement, use of TLMs, use of assessment mechanism for learning etc.

Mode of Transaction:

- Lecture cum discussion method
- Question and answer method
- Computer assisted learning'
- Activity based learning

Practicum   (Number of Classes-08)

Each student will carry out any one of the activities, submit a report and face vivaexam to be conducted by both internal and external examiners.

- Prepare and present a term paper on teacher centric and learner centric perspective of knowledge construction and transmission process.
- Present a seminar on meaning, nature and types of curriculum.
- Present a term paper on NCF2005
- Prepare an appraisal report on the curriculum renewal process of NPE 2020

Suggested Readings

Arora, G.L.(1984). *Reflections on curriculum*. New Delhi: NCERT.

Dewey,J. (1956).*The child and the curriculum.* Chicago, Illinois: University of Chicago Press.

Dewey, J. (1997). *Experience and education*. New York: Touchstone.

Dewey, J. (1997).My pedagogic creed. In D.J. Flinders and S.J. Thorton (eds.), *The Curriculum studies reader*. New York: Routledge, Kegan &Paul.

Egan, K.(2005).*An imaginative approach to teaching.* San Francisco: Jossey-Bass.

Jangira, N.K.,& Singh,A.(1982).*Core teachings kills: 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

Olivia, Peter, F.(1988).Developing the curriculum. London: Scott and Fores man.

SEMESTER-IV

CPS1: Language across the Curriculum
Credit-02

Course Outcome

The course will enable the student teachers to

A. Elaborate the language background of students.
B. Describe the nature of classroom discourse.
C. Explain the nature and need of communication skills including reading and writing

Unit 1: Concerns for Language in Curriculum   (Number of Classes-08)

- Varied language contexts of the learners: dialect, regional varieties and standard language
- Understanding multilingualism in the classroom : challenges and strategies
- Home language and school language.

Unit 2: Language and Curriculum Transaction   (Number of Classes-08)

- Classroom Discourse — developing strategies for using oral language in the classroom
- Discussion as an approach for learning;
- The nature of questioning in the classroom — types of questions and teacher's role.

Unit 3: Developing Communication Competencies- reading and writing
(Number of Classes-08)

- Reading in the content areas — social sciences, science, mathematics; nature of expository texts vs. narrative texts; transactional vs. reflexive texts; schema theory; text structures; examining content area textbooks; reading strategies — such as scanning, skimming and reading for extracting information
- Writing — based on the text, e.g. summary of the text, extrapolation of story, converting a situation into a dialogue, etc.; Process writing; analysing students'

- Writings to understand their conceptions; writing with a sense of purpose — writing to learn and understand.
- Making reading-writing connections: note-making, summarizing

Mode of Transaction
- Lecture cum discussion method
- Question and answer method
- Computer assisted learning'
- Activity based learning

Suggested Readings:

Anderson, R.C. (1984).Role of the Reader's Schema in Comprehension, Learning and Memory. In R.C. Anderson, J. Osbon & R.J. Tierney (ed) *Learning to Read inAmerican schools: Based Readers and content texts*. Hillsdole, Lawrance Erlbaum Associates: New Jersey.

Applying a Vygotskian Model of Learning and Development in B. Spodek (ed.). *Handbook of research on the education of young children.* Macmillan: New York.

Armbruster, Bonnie B. (1984). The Problem of "Inconsiderate Text" In Duffy, G. G. (ed.) *Comprehension Instruction, Perspectives and Suggestions*. Longman:New York.

Butler, A. and J. Turnbill, (1984) *Towards Reading-Writing Classroom* Primary English Teaching Association Cornell University: New York.

Freedman S. W. and A. H. Dyson (2003) Writing in Flood J. et. al. Handbook of Research on Teaching English Language Arts: Lawrence Erlbaum Associates Inc: New Jersey, USA..

Kumar Krishna (2007) *The Child's Language and the Teacher.* National Book Trust: new Delhi.

Labov, W. (1972) The logic of Non- Standard English. In *Language in Education.* Prepared by Language and Learning course Team. Routledge: London.

Martin, Jr. B. (1987) The Making of a Reader: A Personal Narrative. In Bernice E.Cullinan, *Children's Literature in the Reading Programme.* International Reading Association: Michigan.

Mason, J. M. and S. Sinha (1992) Emerging Literacy in the Early Childhood Years.

Monson, R. J. (1991) Charting a New Course with Whole Language. *Edn. Leadership.*

Pinnell, G.S. (1985) Ways to Look at the Functions of Children's Language. In A. Jaggar, M. Trika and Smith-Burke (ed.) *Observing the language learner*. International Reading Association: Newark, DE.

Purves, Alan C. (1988). The Aesthetic Mind of Louise Rosenblatt. *Reader 20.*

Rhodes, L. K. and N. L. Shanklin (1993) Windows into Literacy. Heinemann, TheUniversity of Michigan: UK.

Rothleen, L. and A. M. Meinbach (1991) *The Literature Connection: UsingChildren's Books in Classroom*. Good Year Books: Tucson, USA.

Sinha, S. (2000) Acquiring Literacy in Schools. *Redesigning Curricula:* Asymposium on working a framework for School education *Seminar.*

Sinha, Shobha. (2009). Rosenblatt's Theory of Reading: Exploring Literature. *Contemporary Education Dialogue.*

Teals, W. and E. Sulzby. (1986). Introduction: Emergent Literacy as a perspective for examining how young children become writers and readers. In W. Teals, E. Sulzby (ed.) *Emergent Literacy: Writing and Reading*. Norwood: New Jersey.

EPC 1: Learning to Function as a Teacher

(Credit-02)

Course Outcomes

After completion of this course, the pupil teacher shall
   A. Apply various activities as per the emerging demands in the classroom to engage the students.
   B. Develop self-confidence and skill to engage learners and meet their diverse needs.

Transaction Modes
   a) Presentation in workshop mode
   b) Discussion &reflection session / collective feedback
   c) Reporting
   d) Viewing video clippings followed by discussion and reflection

The following process-based skills essential for secondary schools to be taken up.
   - Critical thinking and reflection,
   - Class room management
   - Managing diversity
   - Contextualization
   - Observation
   - Communication
   - Organisation of group activity/project
   - Assessing learner and giving feedback
   - Process of facilitating learning
   - Core teaching competencies:
       a. *Introducing the lesson*
       b. *Asking different types of questions during the class*
       c. *Giving explaining about the content*
       d. *Encouragement and appreciation students during learning*
       e. *Variation in action and activities in the classroom process*
       f. *Using Blackboard /white board/ smart board*
       g. *Using instructional resources and ICT*

Guidelines for internal assessment
   The above stated ten processes-based competencies will be practiced by the students which will be observed and evaluated during the classes. The best five performances would be taken into consideration for the internal assessment out of 50.

SEMESTER-V

CPS 2: Pedagogy of First Language (Odia) (Part – I)
Credits-04

Course Outcomes

After completion of this course the pupil- teacher shall

A. State the importance of Odia as mother tongue in school curriculum.
B. Discuss the challanges in Odia language teaching
C. Differentiate between language acquisition and language learning..
D. Develop linguistic skills in Odia and integrate in real life.
E. Explain the fundamentals of Odia linguistics and their implications in teaching learning Odia.
F. Identify Problems of articulation in Odia language, specify causes and suggest remediation

Unit I: Odia Language in school currriculum   (Number of classes-10)
- Importance of mother tongue in the life and education of an individual
- Place of Odia as mother tongue in school curriculum in Odisha: compulsory subject, medium of instruction and examination etc.,(both atelementary and secondary levels) in the context of language policy recommended by NPE, 1986, NCF 2005.
- Objectives of teaching Odia at elementary and secondary levels.
- Current challenges of teaching – learning Odia language in schools: multi-lingual context, language background of the learners, syllabus and textbooks, classroom transaction mode and teacher quality.

Unit II: Acquisition and Learning of First Language   (Number of classes-08)
- Difference between language acquisition and language learning: First language acquisition and learning with reference to their meaning and process, factors influencing FLA(Age, Language input, Language anxiety, Language aptitude, Language ego & motivation)
- Approaches/Theories of First Language Acquisition(FLA): Behaviourist(Watson & Skinner), Innatist/Mentalist (N.Chomsky) and Social Integrationist constructivism(Piaget & Vygotsky)

Unit- III: Developing language skills   (Number of classes-12)
- Listening and Speaking- Sub skills and types
- Activities for developing listening and speaking skills: storytelling, dialogues, situational conversations, role plays, simulations, speech, games, contexts etc.
- Reading: Sub skills; kinds – reading aloud and silent reading, extensive and intensive strategies for developing study skills – use of thesauruses, dictionary, encyclopaedia etc.
- Writing: Mechanics of writing, methods, formal and Informal writing: creative writing (short story, poem), reflective writing (essay, articles), letter, diary, notices, reports, dialogue, speech, advertisement etc.
- Reference skills and Higher order skills in reading and writing.

Unit IV: Odia Linguistics and Articulation   (Number of classes-12)

- Elements of Language: Sound, vocabulary and structure
- Odia Dhwani(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
- Spelling mistake—causes and method of correction
- Use of Linguistics in effective teaching-learning of Odia language

Transactional Strategies

- Lecture cum Discussion
- Project work
- Demonstration through A.V. aids like power point presentations, phonetic charts, documents, tape recorders, stories, plays, photographs and videos etc.
- Use of language lab practicum,
- Use of language games, software packages of text, games, phonetic transcription applications
- Use of ICT based language materials

Practicum   (Number of classes-08)

Each student is required to select any two practicum suggested below

- ❖ Prepare a report on the challenges faced by the teachers and learners during teaching-learning of Odia.
- ❖ Design activities for developing listening, speaking skills at different levels.
- ❖ Prepare activities for developing reading and writing skills at different levels.
- ❖ Do a comparative report on different psychological theories views on first language acquisition.
- ❖ Prepare 3 activities to develop the reading skills of learners from any class (VI-VII) students.
- ❖ Present report on common grammatical and spelling errors committed by Odia learners and remediation measures

Suggested Readings

- ➢ National Curriculum Framework 2005; NCERT, December 2005.
- ➢ National Curriculum Framework 2005, Position Paper, National Focus Group on
- ➢ Teaching of Indian languages, NCERT, 2006. 31
- ➢ Techniques and Principles in Language Teaching – Diane Larsen – Freeman: Oxford University Press
- ➢ S.K.Kochhar (1990).Teaching of Mother Tongue,Sterlinhg ,New Delhi

Odia

- ➢ Ryburn,W.M.Teaching of Mother Tongue,Falmer Press
- ➢ Palmer, H,R.Principles iof Language teaching
- ➢ Nayak,B;Mohanty,J:Odiya Bhasa O Sahityara Bhitibhumi O Shikshyadan Padhati

- Pattnaik,D.P.Mother tongue and Destiny
- Pattnaik,D.P. OdiyaBhasa O Bhasa Bigyan
- Mohapatra,B.P.Matrubhasa Odia
- Dhal, G.B. (1974). Dhwani bijanana. Bhubaneswar: Odisha Rajya Pathya Pustaka Pranayana Sanstha.
- Mohanty, B. (1970). Odia bhasara utpati O 65arma bikasha. Cuttack : Friends Publishers.
- Mohanty, J., Barik, N. & Khandai, U. (1983). Odia sikshadana paddhati. Cuttack : Nalanda.
- Mohapatra, D. (1976). Odia Dhwani tattwa O sabdha sambhar. Cuttack : Grantha Mandir.
- Mohapatra, N. & Das, S. (1943). Sarbasara vykarana. 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. Jajpur : Saraswati Printers Sahoo, B. (1975). Bhasa bigyanara rupa rekha. Cuttack : Paramarthi Printers
- Sarangi, N. (2001). Bruhat odia vykarana. Cuttack : Satyanarayan Book Store
- Tripathy, K.B. (1977).Odia bhasa tattwa O lipira krama bikash. Bhubaneswar : Odisha

CPS 2: Pedagogy of Language (English) (Part-I)
Credits-04

Course Outcomes
A. Explore and analyse the present status, importance and challenges of English language teaching in Indian school curriculum.
B. State aims and objectives of teaching English in school curriculum and language policy as conceived in NPE-1968, NPE-1986, POA-1992 and NCF-2005.
C. Analyse linguistic structures and aspects of English language in relation to their implications.
D. Differentiate between language acquisition and language learning.
E. Compare different psychological views on acquisition and learning of English language.
F. Develop linguistic skills in English and integrate in real life.

Unit-I: Foundations of Language Teaching   (No. of Classes-12)
- Language teaching in India: Historical Background, present status and importance.
- Policies and provisions relating to languages: Article 343-351,350A; NPE-1968, NPE-1986; POA 1992; National Curriculum Framework-2005.
- Importance of English language in India and the world today. Official language, language of judiciary, trade and commerce, press and media, communication, link language (national and international), library language, passport for employment, language of ICT etc.
- Place and importance of English in school curriculum: compulsory subject, medium of instruction and examination etc.
- Objectives of teaching English at elementary and secondary levels with reference to NCF 2005.
- Current challenges of teaching – learning English in schools: multi-lingual context, language background of the learners, syllabus and textbooks, classroom transaction mode and teacher quality.

Unit-II: Language structure and Linguistic behaviour   (No. of Classes-12)
- Language as a system: symbols and levels (substance, forms and context).
- Importance, nature and functions of language
- Linguistic behaviour with reference to language skills – types (receptive Vs. productive; input vs. output) and their independence and interdependence
- Factors affecting language skills in English.
- Linguistic structure and aspects of English language – phonological, morphological, syntactic, semantic and pragmatic

Unit-III: Acquisition and Learning of Second Language   (No. of classes-10)
- Difference between language acquisition and language learning
- Psychology of language acquisition and learning – behaviouristic, cognitive and constructivist views.
- Language acquisition and language learning in English: meaning and process

- Language context and input rich classroom environment facilitating language acquisition and language learning
- Challenges of teaching – learning of English in classroom transaction

Unit-IV: Developing language skills in English   (No. of classes-10)
- Listening and Speaking (Sub skills and types)
- Activities for developing listening and speaking skills: storytelling, dialogues, situational conversations, role plays, simulations, speech, games, contexts etc.
- Reading: (Sub skills, kinds) – reading aloud and silent reading, extensive and intensive, strategies for developing study skills – use of thesauruses, dictionary, encyclopaedia etc.
- Writing: Mechanics of writing, methods, formal and Informal writing: creative writing (short story, poem), reflective writing (essay, articles), letter, diary, notices, reports, dialogue, speech, advertisement etc.
- Reference skills and Higher order skills in reading and writing.

Transactional Strategies
- Lecture cum Discussion
- Project work
- Demonstration through A.V. aids like power point presentations, phonetic charts, documents, tape recorders, stories, plays, photographs and videos etc.
- Use of language lab practicum, language games
- Use of language games, software packages of text, games, phonetic transcription applications
- Use of ICT based language materials

Practicum   (Number of classes-08)
Each student is required to select any two practicum suggested below
- Prepare a report on the challenges faced by the teachers and the learners in schools.
- Prepare activities for developing listening, speaking for different levels.(5E & ICON Model)
- Prepare activities for developing reading and writing for different levels. .(5E & ICON Model)
- Develop a questionnaire, interview ten people/students and write a report on 'English Language in India'.

Suggested Readings:

- National Curriculum Framework 2005; NCERT, December 2005.
- National Curriculum Framework 2005; Position Paper, National Focus Group on
- Teaching of English; NCERT, 2006.
- National Curriculum Framework 2005, Position Paper, National Focus Group on
- Teaching of Indian languages, NCERT, 2006.
- The Right of Children to Free and Compulsory Education Act-2009, The Gazette of India, 2009.
- Brumfit. C (1984); Communicative methods in Language Teaching; Cambridge University press: Cambridge.

- Chomsky (1964) in Day. E. M (2002): Identity and the young English language learner; Multilingual Matters Limited; London.
- Gardner and Lambert (1972) Attitudes and Motivation in second language learning; Rowley; Newbury house.
- Jeremy Harmer, Longman Handbooks for Language Teachers, The Practice of English Language Teaching, 1998.
- Srijan1, Creative Writing and Translation, National Council of Educational Research and Training, New Delhi 2010.
- Samajh ka Madhyum, National Council of Educational Research and Training, New Delhi 2009.
- Source Book on Assessment for Classed I-V, Language English, NCERT, October 2008.
- Learning Indicators till the Elementary Stage, National Council of Educational Research and Training, New Delhi 2015
- Continuous Comprehensive Evaluation – Exemplar Package for Upper Primary Stage in English, National Council of Educational Research and Training, New Delhi 2015
- Agnihotri, R.K., Khanna, A.L. 1994. (eds.), Second Language Acquisition: Socio-cultural and Linguistic Aspects of English in India (RAL1). New Delhi: Sage Publications.
- Beaumount, M. 1996. The Teaching of Reading Skills in Second/Foreign Language. Patras: The Hellenic Open University.
- Cummins, J. and Swain, M. 1986. Bilingualism in Education. London: Longman.
- Ellis, R. 1985. Understanding Second Language Acquisition. Oxford: Oxford University Press.
- Prabhu, N.S. 1987. Second Language Pedagogy. Oxford; New York: Oxford University Press.
- Krashen, Stephen. 1989. We acquire vocabulary and spelling by reading: Additional evidence for the input hypothesis. Modern Language Journal 73:4. Pp. 440-64.
- Kumar, Krishna, 2011. The Child's Language and the Teacher, a Handbook, New Delhi, National Book trust India,.
- Techniques and Principles in Language Teaching – Diane Larsen – Freeman: Oxford University Press

CPS 2: Pedagogy of Mathematics (Part-I)

Credits-04

Course Outcomes

After completion of this course, the pupil teacher shall

    A. Explain the nature, scope, and values of Mathematics and its place in the school Curriculum.

    B. State the objectives of teaching and learning Mathematics at the secondary and higher secondary levels of school education.

    C. Develop daily, short term, long term plans for teaching and learning mathematics at the school stage.

    D. Analyse different approaches and methods of teaching and learning mathematics for different content and context.

    E. Develop scientific plan and techniques for assessing comprehensive mathematical knowledge among students.

Unit 1: Concept and Importance of Mathematics Education

(Number of classes-08)

- Nature and Scope of Mathematics, Mathematical proof, structure and logic.
- Meaning and building blocks of mathematics-undefined terms, definitions, axioms, Theorems; the nature of mathematical propositions- truth values, truth tables, Open Sentences, logically valid conclusions, use of quantifiers, implications – necessary and sufficient conditions, a mathematical statement and its variants, converse, inverse and contra positive, compound propositions.
- Values of Mathematics: Cultural, Disciplinary and Utilitarian values.
- Place of Mathematics in School Curriculum, Correlation of Mathematics with other subjects.
- Contribution of the Indian Mathematicians.

Unit 2: Objectives of Teaching and Learning Mathematics (No. of classes-08)

- Aims and Objectives of teaching Mathematics at Secondary and Higher Secondary Level.
- General and Specific Learning Objectives of teaching Mathematics with respect to revised Bloom's Taxonomy.
- Objectives of teaching and learning for Algebra, Geometry, Menstruation and Trigonometry

Unit 3: Approaches/Methods (No. of classes-09)

- Learning by Discovery, Laboratory Method(Nature and purpose)
- Inductive, deductive, analysis and synthesis methods.
- Problem Solving (Importance and steps)
- Constructivist approaches: Self-learning and peer learning strategies, Projects and Collaborative strategies; 5E and ICON Models,

Unit 4: Planning and Assessment (No. of classes-15)

- Lesson plan, Unit plan, Yearly plan(Importance and steps)

- Assessment of procedures learning: Unit test – Designing blue print, item Construction, Marking schemes.
- Assessment for Learning: Assignments, Projects and portfolios, group and collaborative technique.
- Non-testing method: Observation, Rating Scale.

Transactional Strategies
- Lecture cum Discussion, Project work, Demonstration through A.V. aids like power point presentations, Action Research, School Visit.
- Group work for developing different types of plans, especially lesson in Mathematics.
- Group and individual work for construction of tools for measuring, assessing mathematical learning outcomes.

Practicum   (No. of Classes-08)
Each pupil teacher has to select any two from the following activities and submit the reports.
- List the names of famous Indian Mathematicians and their contributions.
- Development of learning activities from Mathematics (at least 5 activities on any 2 topics of Algebra, 2 from Geometry, 2 from menstruation and trigonometry area.
- Preparation of Annual and Unit Plans for teaching-learning Mathematics.
- Development of Lesson plans in Mathematics

Suggested Readings

Beckmann C.E ,Thompson D.R and Rubenstein,R.N.(2010).Teaching and learning high school mathematics.New Jersey: John Wiley and Sons Inc.,

Britton E, Huntley M.A., Jacobs G and Weinberg A.S.(1999). Connecting mathematics and science to workplace contexts : A Guide to Curriculum materials, Corwin Press Inc., California

Chambers P,(2010).Teaching Mathematics: Developing as a reflective secondary teacher. New Delhi: SAGE.

Cowan, Pamela (2006).Teaching mathematics, A handbook for primary and secondary school teachers. London: Routledge.

Davis D.R.(1951). The teaching of mathematics.London: Addison Wesley Press,

Hollands, Roy (1990).Development of mathematical skills, Oxford, London: Blackwell Publishers.

James,Anice(2005). Teaching ofmathematics.Hyderabad: Neelkamal Publications.

Katz, V.J. (Ed.)(2007).The Mathematics of Egypt, Mesopotamia, China, India and Islam :A Sourcebook. Princeton, NJ: Princeton University Press.

Kothari, R.G., and Shelat, P.H. (2011).Mathematical weaknesses among secondary school students. Germany: VDM Verlag Publishers.

Kilpatrick J, Hoyles C and Skovsmose,O. (Eds.) (2005). Meaning in mathematics education.New York, NY: Springer.

NCERT (2006).Position Paper: National Focus Group On Teaching of Mathematics. New Delhi: National Council of Educational Research and Training.

NCERT (2012).Pedagogy of Mathematics: Textbook for Two-Year B. Ed Course. New Delhi: NCERT..

NossR.(19988). The Computer as a cultural influence in mathematical learning. In Bishop A.J. (Ed.),Mathematics education and culture, London : Kluwer Academic Publishers.

Novak,J.D.&Gowin, D.B.(1984). Learning how to learn. New York, NY: Cambridge University Press.

Polya, George (1965). Mathematical discovery(Vol.II). London: John Wiley and sons, INC.,

Schonnel, F.J. (1965). Diagnostic and remedial teaching in arithmetic.London:Lever and Boyd.

Shetty, Balkrishna(2013). What is mathematics? NewDelhi: National Book Trust.

Skemp,R.R., (1971), The Psychology of Learning mathematics, Penguin Books

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William D.(1998).A Framework for Thinking About Research in Mathematics and Science Education.In Malone J.A., Atweh B. and Northfield J.R. (Eds.),Research and supervision in mathematics and science education.New Jersey: Lawrence Erlbaum Associates.

CPS 2 - Pedagogy of Biological Science (Part I)

Credits-4

Course outcomes:

A. State the importance and value of Biological science for their daily life and academic field.
B. Critically evaluate that Biological science as a dynamic and expanding body of knowledge.
C. Explore natural surroundings and relationships of everyday's experience with concepts of Biological Sciences.
D. Differentiate different strategies and methods used for teaching different concepts in Biology.
E. Formulate appropriate and meaningful problem solving situations and projects based on curriculum

Unit -1 Nature and Scope of Biological Science   (Number of classes-06)

* Biological Science as a domain of scientific enquiry: Nature and characteristics of scientific enquiry, Distinguish it from other domains of scientific enquiry.
* Scope of Biological Science: Diversity of the living world, origin of life and its evolution, environment, health and well being, sustenance of the ecosystem vis-à-vis values and ethics.
* Linkages of Biological science with other branches of science and other disciplines.

Unit – 2 Aims and Objectives of Teaching Biological Science

(Number of classes-10)

* General and specific aims of teaching Biological science in secondary and higher secondary classes.
* Development of knowledge and understanding of Biological science: Facts, principles and its application for secondary level.
* Acquiring skills to understand processes of studying Biology: Observation, exploration, experimentation; Generalisation and validation.
* Developing Problem solving skills relating to Biological sciences: Relationship of Biology education with environment and its sustenance.

Unit-3 Curriculum and Learning Resources for Biology teaching at School stage

(Number of classes-12)

* Place of Biological Science in school curriculum (Elementary, secondary and higher secondary levels)
* Selection and organisation of content in Biology (on the basis of forms of knowledge {*viz.* declarative, procedural and situational}and themes)
* Analysis of school syllabus, textbooks and other printed materials in Biology (NCERT, State) on the basis of NCF 2005 and position paper on teaching of science.
* Learning resources in Biological Science: Charts, Graphs, Bulletin Boards,

Models, Film strips, slides, transparencies, and open education resources (Preparation, collection, procurement and use)

- Laboratory as learning resource: Preservation of Biological specimens and building Biological museum, Science exhibitions and Science clubs. Locality and community as learning resources.

Unit – 4 Approaches and Methods of Learning Biology
(Number of classes-12)

- Observation: Types, importance in Bio-Science, process and recording of observation
- Experimentation: Experimentation under controlled conditions within laboratory and beyond laboratory situations; Process and limitations
- Problem solving: Problem identification, formulation of hypotheses, collection of data, testing hypotheses and arriving at solution (with suitable examples from BiologicalScience).
- Project: Situation analysis, selection of the project, preparation of the project proposal, implementation, evaluation and reporting the project.
- Use of ICT for self- learning and collaborative learning in learning concepts of Biologicalscience.

Transactional Strategies:

- Lecture, lecture cum Discussion, Project work, Demonstration through A.V. aids like power point presentations, Action Research, Visit, Group work and Presentations
- Group work for developing different types of plans, especially lesson plans to transact different Biological science concepts employing different approaches and methods as specified in Unit 4.
- Group and individual work in developing plans and tools for conducting CCA in Biological science for different classes at the secondary stage of schooling.

Practicum   (No. of classes-08)

Each Pupil- teacher has to select any two from the following activities and submit the reports:
- Prepare and present two lessons from secondary syllabus of Biology by using learning resource (one must be by PPT).
- Interviewing with the Biological teachers from University and school about nature and practices of teaching biological science and reporting.
- Analysis of secondary level Biology Text book of B.S.E., Odisha and NCERT
- Analyze NCF 2005 document and report about nature and aims of teaching and learning of Bioscience.

Suggested Readings

- Fraser, B. J. and Tobin, K. G. (Eds.). *International handbook of science teaching (Part 1)*. Dodrecht, The Netherlands: Kluwer Academic.
- Mintzes J., Wandersee, J. and Novak, J. (Eds.) (2000). *Assessing science understanding: A human constructivist view*. San Diego, CA.: Academic Press.
- NCERT (2000). *Position paper of national focus group (NFG) on aims of education*. National Council of Educational Research and Training (NCERT), New Delhi.
- NCERT (2000). *Position paper of national focus group (NFG) on education for peace.* National Council of Educational Research and Training (NCERT), New Delhi.
- NCERT (2000). *Position paper of national focus group (NFG) on examination reforms*. National Council of Educational Research and Training (NCERT), New Delhi.
- NCERT (2000). *Position paper of national focus group (NFG) on gender issues in education.* National Council of Educational Research and Training (NCERT), New Delhi.
- NCERT (2000). *Position paper of national focus group (NFG) on habitat and learning*. National Council of Educational Research and Training (NCERT), New Delhi.
- NCERT (2000). *Position paper of national focus group (NFG) on teaching of science*. National Council of Educational Research and Training (NCERT), New Delhi.
- NCERT (2005). *National curriculum framework for school education*. National Council of Educational Research and Training (NCERT), New Delhi.
- Sutton, C.R. & Hayson, J.H. (1974). *Theart of the science teacher*, McGraw Hill Book Company Ltd.
- Vaidya, N. (1999). *Science teaching for 21st Century*. Deep & Deep Publication.
- Journal of Research in Science Teaching (Wiley-Blackwell)
- *Science & Children.* A peer reviewed journal published by National Science Teachers Association (NSTA).
- *The Science Teacher*. A peer reviewed journal published by National Science Teachers Association (NSTA).

CPS 3: Pedagogy of Social Science (Part-I)

Credit-4

Course Outcomes

The course will enable the pupil-teachers to

A. Explain social science as an individual academic discipline and an integrated/ interdisciplinary area of study
B. State different teaching learning strategies for social science subject
C. Differentiate the content and contextual application of various method of teaching
D. Identify, prepare, collect different teaching-learning resource materials and use effectively in the classroom
E. Critically analyze text book and syllabus of social science subjects at different stages of school education
F. Prepare annual plan, unit plan and lesson plan in social science teaching.

Unit-I Social Science as an Interdisciplinary area of Study: Context and Concerns
(Number of Classes 14)
- Meaning, Nature, Scope and Importance of Social Sciences
- Correlation of social sciences with life, nature, mathematics, science and technology
- Perspectives of Social Sciences in school curriculum: How social facts and opinion, explanations and arguments; and spatial and temporal contexts are constructed
- Present position of social sciences in school curriculum
- General and subject specific objectives of social sciences at different stages of school education
- Development and organization of subject related content at different stages of school education

Unit-II Teaching-learning Strategies in Social Sciences
(Number of Classes 10)
- Interactive, critical pedagogy and constructivist strategies in social sciences
- Teaching-learning strategies in social sciences: Narration cum discussion, problem solving, observation, field trip, project work, concept mapping, collaboration, cooperative learning, dramatization, simulation, bal-panchayat, mock parliament, storytelling, computer assisted learning and teaching-learning strategies for children with different abilities
(Meaning and uses of above mentioned teaching-learning strategies in different subject areas)

Unit-III Learning Resources in Social Science Pedagogy
(Number of Classes 10)
- Primary and Secondary Sources: Data from field, library materials such as textual/reference materials, journals, magazines, newspapers, reports, documents, records and gazettes, dictionaries and encyclopedias
- Teaching-learning resources in Social Sciences: Preparation, collection and use of content specific teaching learning materials- -atlas, map, globe, map book -timeline, historical map -table, diagram, graph -chart, picture, photograph, model -T. V., radio, CDs, multimedia and internet, satellite imagery and aerial photograph.

Unit-IV Lesson Planning, Instruction and Social Science Text Book
(Number of Classes 08)
- Planning for instruction in social sciences (Planning of different skills, strategies, activities and learning experiences in different social sciences subject areas)
- Development of year plan, unit plan and lesson plan

- Characteristics of good textbook in Social Sciences
- Analysis of social science text books in the light of concepts, pedagogical processes, resources, child perspectives, national and state interests (social science text books of different school boards may be taken up for discussion and analysis)

Transactional Strategies
- Lecture-cum-discussion along with interactive group discussion
- Project work
- Field trips, group discussions, brain storming and simulation in the form of mock session, Bal Panchayat etc.
- Development of skills and demonstrations of timelines, charts, models and map by hand on experience be made,
- Use of ICT and Newspaper clippings, Quiz box on current affairs, wall magazines.

Practicum   Full Mark- 25   (Number of Classes 08)
Each student teacher is to select any two of the following activities and submit the reports/ materials developed:
- Organization of Programmes
  - ✓ Organization of Group Discussion
  - ✓ Development of CAL Package
  - ✓ Exhibition of teaching aids in social sciences
  - ✓ Preparation of Annual plan, Unit plan and Lesson plan
  - ✓ Organization of Bal-panchayat, Mock Parliament
  - ✓ Text book and syllabus analysis reports
  - ✓ Find out General and subject specific objectives of social sciences at different stages of school education

Suggested Readings

Arora, K .L. (1976).*The Teaching of Geography*. Jullandhar: Prakash Brothers.

Bhaduri, A. (2005). *Development with Dignity: A case for full Employment*, New Delhi: National Book Trust.

Blaug, M. (1992).*The Methodology of Economics or How Economist Explain*. Cambridge: Cambridge University Press.

Bloch, M. (1990).*The Historian's Craft*. Manchester: Manchester University Press.

Broadman, D. (1985). *New Directions in Geography Education*. London: Fehur Press.

Burke, P. (1991). *New Perspectives on History Writing*. Oxford: Blackwell.

Burton, W. H. (1972). *Principles of History Teaching*. London: Methuen.

Carr, E. H. (1962). *What is History*? London: Knopf.

Carretero, M., and Voss, J. 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.

Dasgupta, P. (2007). *Economics: Avery Short Introduction*. Oxford University Press.

Dhamija, N. (1993). *Multimedia Approaches in Teaching Social Studies*. New Delhi: Human.

Drake, F. D. & Lynn, R. N. (2005).*Engagement in Teaching History: Theory and Practices for Middle and Secondary Teachers*. Columbus, OH: Pearson.

George, A. M. and Amman, M. (2009).*Teaching Social Science in Schools: NCERT's New Textbook Initiative.* New Delhi: Sage.

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

Graves, N.G. (1982). *New Source Books for Geography teaching*.

Gunnin, D. (1978). *The Teaching of History*. London: Goom Helm Ltd.

Huckle, J. (1983). *Geographical Educational Reflection and Action*. London: Oxford UniversityPress.

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.

Kent, A. (Ed.) (2000). *Reflective Practice in Geography Teaching*. London: Paul Chapman Publishing Ltd.

Kochhar, S. K. (1970). *Teaching of Political Science*. New Delhi: Sterling Publishers Publishing House.

Kuhn, T. S. (1970). *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press.

Lewis, B. (1975). *History: Remembered, Recovered, Invented*. New York: Simon and Schuster, Inc.

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

M. (2002).*Teaching Geography in Secondary Schools: A Reader*. London: Taylor& Francis.

Mehlinger, Howard D. (Ed.) (1981). *UNESCO Handbook for the Teaching of the Freedom Struggle in India and Pakistan.* New Delhi: Penguin India.

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

NCERT. (2006). *National Focus Group Position Paper on Teaching Social Sciences*. New Delhi: NCERT.

Oxford: Basic Blackwell.

Root, M. (1993). *Philosophy of Social Sciences*. Oxford: Blackwell.

Sartori, G. (ED.) (1984). *Social Science Concepts: A Systematic Analysis*. New delhi: Sage Publications.

Slate, F. (1982). *Learning through Geography*. London: Butler and Tanner Ltd.

Stanford, M. (1985).*The Nature of Historical Knowledge*. Oxford: Basic Blackwell.

Trigg, R. (1985). *Understanding Social Science: A Philosophical Introduction to the Social Sciences*.

UNESCO.(1965). *Source Book for Geography Teaching*. London: Longman.

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

Walford, R. (1981). *Signposts for Geography Teaching*. London: Longman.

Wilkins, E. J. (1979). *Elements of social Science: A Philosophical Introduction to the Social Sciences*. Oxford: Basic Blackwell.

CPS 3-Pedagogy of Physical Science (Part-I)
Credit-04

Course Outcome-
On completion of the course, the pupil teacher will be able to
   A. States the nature and importance of Physical Science and its relevance in school curriculum
   B. Specify various aims and objectives of learning physical science
   C. Explain the process of science and role of laboratory in teaching-learning situation.
   D. Analyze and use various methods and approaches of teaching-learning of physical science.
   E. Explore and develop different learning resources and materials in learning different units in Physical Science.
   F. Explain the inter-relation between science and other subject.

Unit1:Nature and Scope of Physical Science   (Number of classes 12)
   * Physical Science as a domain of inquiry, as a dynamic and expanding body of knowledge
   * Historical Perspectives in Physical Science with illustration from topics such as structure of atom, law of chemical combination, electricity, stochiometry, equivalent mass, models of the universe, nature of light, and magnetism etc.
   * Scope of Physical Science
   * Interdisciplinary linkages and social concerns in physical science
   * Place of physical science in school curriculum
   * National Curriculum Frameworks of NCERT with specific reference to Physical Science Education
   * Analysis of school syllabus, textbooks and other printed materials in Physical Science (NCERT, State)

Unit2: Aims and objectives of Teaching Physical Science   (Number of classes 7)

   * Aim of teaching physical science at school curriculum
   * Knowledge and understanding through science, Nurturing process skills of science, developing scientific attitude and scientific temper
   * Nurturing curiosity, creativity and aesthetic sense in Physical science
   * Imbibing various values related to Science Developing problem solving skills in Physical Science.

Unit3: Approaches and Strategies in Teaching Physical Science
(Number of classes 13)

   * Selecting appropriate approach and strategy in learning Physical Science based on content, learner, context
   * Role of Observation and Experimentation in learning Physical Science
   * Approaches and Strategies of learning Physical Science: Collaborative learning, Problem solving, Concept mapping, Conceptual Change Model, Experiential learning, Inquiry approach, Project Method, Analogy strategy
   * ICT integrated Physical Science Learning

Unit4: Preparation and Use of Learning Resources in Physical Science (Number of classes 9)

   * Preparation, collection, procurement and use of learning resources in Physical Science such as Charts, Graphs, Bulletin Boards, Models, ICT resources etc
   * Laboratory as a learning resource to facilitate induction, deduction, process Skills acquisition, nurturing creativity, Experiences in organizing physical science laboratory

- Role of Science museum, Science exhibitions and Science clubs in facilitating learning Physical Science

Innovative materials and processes, Community resources in learning Physical Science

Transactional Strategies

- Lecture, lecture cum Discussion, Project work, Demonstration through A.V. aids like power point presentations, Action Research, Visit, Group work and Presentations
- Group work for developing different types of plans, especially lesson plans to transact different physical science concepts employing different approaches and methods as specified in Unit 3.

Practicum   *No of classes- 8*
Each pupil teacher should undertake minimum two of the following:
1. Developing five activities/experiments in physical science and prepare a brief report.
2. Assignment on Contribution of eminent scientists- Isaac Newton, John Dalton, J.C.Bose,Albert Einstein, Niels Bohr, C.V.Raman, Marie Curie, De Broglie, V.Ramakrishnan etc.
3. Preparation of materials and programmes to inculcate scientific attitude among students.
4. Drawing concept-maps for secondary level physical science concept.
5. Design and develop at least two learning resources for physical science (one out of them has to be an ICT based learning resource)

Suggested Reading
1. Fraser, B.J.and Tobin, K. G. (Eds.).*International handbook of science teaching (Part1)*. Dodrecht, The Netherlands: Kluwer Academic.
2. MintzesJ.,Wandersee,J.and Novak,J. (Eds.) (2000). *Assessing science understanding: Ahuman constructivist view*. SanDiego,CA.: Academic Press.
3. NCERT (2000). *Position paper of national focus group (NFG) on aims of education*.National Council of Educational Research and Training(NCERT), New Delhi.
4. NCERT (2000).*Position paper of national focus group(NFG) on education for peace.* National Council of Educational Research and Training(NCERT), New Delhi.
5. NCERT (2000).*Position paper of national focus group(NFG)on examination reforms*. National Councilof Educational Research and Training (NCERT), New Delhi.
6. NCERT (2000). *Position paper of national focus group (NFG) on gender issues in education.* National Council of Educational Research and Training (NCERT), New Delhi.
7. NCERT 2000).*Position paper of national focus group (NFG)on habitat and learning*. National Council of Educational Research and Training (NCERT), New Delhi.
8. NCERT (2000). *Position paper of national focus group (NFG) on teaching of science*. National Council of Educational Research and Training (NCERT),New Delhi.
9. NCERT (2005).*National curriculum framework for school education*. National Council of Educational Research and Training (NCERT), New Delhi.
10. Mohan,R.(2002),Innovative Science Teaching for Physical Science Teachers, Prentice Hall of India Pvt. Ltd., New Delhi
11. Steve Alsop, Keith Hicks(2007).Teaching Science: A Handbook for Primary and Secondary School Teachers, Kogan Page, New Delhi.
12. Sutton,C.R.&Hayson,J.H.(1974).*The art of the science teacher*, Mc Graw Hill Book Company Ltd.
13. Vaidya,N.(1999).*Science teaching for 21st Century*. Deep & Deep Publication.

14. Journal of Research in Science Teaching (Wiley-Blackwell)
15. *Science & Children.* A peer reviewed journal published by National Science Teachers Association(NSTA).
16. *The Science Teacher.* A peer reviewed journal published by National Science Teachers Association (NSTA).

SEMESTER-VI
CPS 2: Pedagogy of First Language (Odia) (Part-II)
Credits-4

Course Outcomes

The course will enable the student teachers to –

   A. Analyse different methods, approaches for teaching Odia at various levels and context.
   B. Design pedagogical strategies for teaching-learning Odia using different methods and approaches.
   C. Plan and Transacts lesson plans covering all aspects of Odia language.
   D. Construct assessment tools and test items in Odia.
   E. Prepare appropriate teaching-learning materials and use effectively.

Unit 1: Teaching Odia: Methods and Techniques   (No. of classes-12)

   * Meaning of Method and techniques and their differences
   * Methods: principles, objectives, advantages, limitations
   * Audio-lingual method, Comprehension-Appreciation, Communicative teaching- learning
   * Techniques and Activities: Language games, Group work, Pair work, Collaborative and Co-operative work, Project and Peer interaction
   * Implications of methods and techniques for classroom transaction.

Unit II: Planning Learning Activities   (No. of classes-12)

   * Lesson plan, unit plan(importance, prerequisites, steps)
   * Teaching-learning of different content (Objectives, forms, transactional strategies following communicative and constructivist approaches(5E and ICON Model)
       ➢ Prose (detailed and non-detailed)
       ➢ poetry
       ➢ Grammar and composition

Unit-III: Learning assessment in Odia   (No. of classes-10)

   * Assessing language skills: strategies –oral & written; peer and group assessment
   * Continuous Compressive Assessment (CCA) – periodicity, assessment tools, reporting and feedback.
   * Framing objective - based test items: extended response type, restrictive response type and objective type.
   * Constructive approach to assessment: Rubric, Portfolio, Journal writing.

Unit IV: Learning Resources   (No. of classes-08)

   * Developing local specific teaching learning materials
   * ICT based instructional material
   * Language laboratory, language clubs: formation, uses, organizing various activities.
   * Text book analysis: purpose and process

Transactional Strategies
   * Lecture cum Discussion
   * Project work

- Demonstration through A.V. aids like power point presentations, phonetic charts, documents, tape recorders, stories, plays, photographs and videos etc.
- Use of language lab practicum, language games
- Use of software packages of text, games, phonetic transcription applications
- Use of ICT based language materials

Practicum   (No of classes-08)
Each student teacher should undertake minimum two of the following:
- Do a comparative study of one textbook of Odia from any two levels (elementary and secondary)
- Analyze the question papers of Odia language (Previous-3 years) — classes from I X &XII (any board) in the light of new approach of assessment.
- Develop objective based objective type test items for upper primary and secondary stage to assess all the aspects of language learning.
- Select any ten questions from the class Odia textbook which lend scope to the creativity of the learners.

Suggested Readings
- National Curriculum Framework 2005; NCERT, December 2005.
- National Curriculum Framework 2005, Position Paper, National Focus Group on
- Teaching of Indian languages, NCERT, 2006.
- The Right of Children to Free and Compulsory Education Act-2009, The Gazette of India, 2009.
- S.K.Kochhar (1990).Teaching of Mother Tongue,Sterlinhg ,New Delhi

Odia
- Ryburn,W.M.Teaching of Mother Tongue,Falmer Press
- Palmer, H,R.Principles iof Language teaching
- Nayak,B;Mohanty,J:Odiya Bhasa O Sahityara Bhitibhumi O Shikshyadan Padhati
- Pattnaik,D.P.Mother tongue and Destiny
- Pattnaik,D.P. OdiyaBhasa O Bhasa Bigyan
- Mohapatra,B.P.Matrubhasa Odiya
- Dhal, G.B. (1974). Dhwani bijanana. Bhubaneswar : Odisha Rajya Pathya Pustaka Pranayana Sanstha.
- Mohanty, B. (1970). Odia bhasara utpati O 65arma bikasha. Cuttack : Friends Publishers.
- Mohanty, J., Barik, N. & Khandai, U. (1983). Odia sikshadana paddhati. Cuttack : Nalanda.
- Mohapatra, D. (1976). Odia Dhwani tattwa O sabdha sambhar. Cuttack : Grantha Mandir.
- Mohapatra, N. & Das, S. (1943). Sarbasara vykarana. 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. Jajpur : Saraswati Printers Sahoo, B. (1975). Bhasa bigyanara rupa rekha. Cuttack : Paramarthi Printers
- Sarangi, N. (2001). Bruhat odia vykarana. Cuttack : Satyanarayan Book Store Tripathy, K.B. (1977). Odia bhasa tattwa O lipira krama bikash. Bhubaneswar : Odish

CPS 2: Pedagogy of Language (English) (Part-II)
Credits-4

Course Outcomes

A. Analyse and use different methods, approaches for teaching English at various levels in the Indian content and context.
B. Create and organise activities, tasks for learners including audio-video materials, ICT and Internet.
C. Transacts various types of lesson plans covering all aspects of English language following different approaches.
D. Develop strategic plan and techniques for assessing comprehensive English knowledge among students.
E. Identify Problems of articulation in English in Indian context, its causes and remediation.

Unit-I: Approaches, Methods and Techniques   (No. of classes-12)

- meaning of approach, method and techniques and their differences
- Approaches: (meaning, principles, techniques, advantages and limitations)
  - Structural-oral-situational approach
  - Communicative approach
  - Silent way
  - Suggestopedia
  - Total Physical Response(TPR)
- Methods: grammar-translation, Direct method, Audio-lingual method, Bilingual method, Communicative teaching- learning
- Techniques and Activities: Language games, Group work, Pair work, Collaborative and Co-operative work, Project and Peer interaction
- Implications of approaches, methods and techniques for classroom transaction.

Unit-II: Planning and Assessment   (No. of classes-12)

- Prerequisites for planning lessons: Determining the scope of content to be dealt with, specifying learning objectives, choosing methods, approaches and strategies, arranging teaching- learning materials, designing teaching learning activities and designing formative assessment strategies.
- Teaching different content areas: Objectives, importance and procedure, transactional strategies following communicative and constructivist approaches (5E and ICON Model)
  - Prose (detailed, non-detailed)
  - Poetry
  - Grammar (formal, functional)
  - Composition (essay, letter, noting, drafting)
  - Vocabulary
- Assessing language skills: strategies –oral & written; peer and group assessment; assessment within and beyond class room.

- Continuous Compressive Assessment (CCA) of learning in second Language– periodicity, assessment tools, reporting and feedback.
- Framing objective - based test items: extended response type, restrictive response type and objective type.
- Constructive approach to assessment: Rubric, Portfolio, Journal writing & Open ended item.

Unit-III: Learning Resources for Teaching-Learning English

(No. of classes-06)

- Online language learning resources- access and use of ICT.
- Developing local specific teaching learning materials & ICT based instructional material
- language laboratory, language clubs(formation, Use, organizing various activities)
- Text book analysis: purpose and process.

Unit-IV: Place and Manner of Articulation   **(No. of classes-10)**

- Sounds of English language: Vowels, Diphthongs and Consonants along with phonetic transcription.
- Organs of speech: Their role in articulation.
- Stress: Meaning, pattern, form and principles.
- Intonation: Meaning and types
- Problems of articulation in English in Indian context: Nature, causes and remediation

Transactional Strategies

- Lecture cum Discussion
- Project work
- Demonstration through A.V. aids like power point presentations, phonetic charts, documents, tape recorders, stories, plays, photographs and videos etc.
- Use of language lab practicum, language games
- Use of language games, software packages of text, games, phonetic transcription applications
- Use of ICT based language materials

Practicum   **(No. of Classes- 08)**

Each pupil teacher should undertake minimum two of the following:

- Do a comparative study of one textbook of English from any class (VI to VIII) developed by any two states.
- Identify and list Language (English) related errors common among students.
- Develop a question paper for upper primary and secondary stage to assess all the aspects of language learning.
- Analyze the question papers of English language (Previous-3 years) — classes X &XII (any board) in the light of new approach of assessment.
- Frame objective based test items for assessing English learning from any class(VI to VIII) of BSE Board.

Suggested Readings:

- National Curriculum Framework 2005; NCERT, December 2005.
- National Curriculum Framework 2005; Position Paper, National Focus Group on

- Teaching of English; NCERT, 2006.
- National Curriculum Framework 2005, Position Paper, National Focus Group on
- Teaching of Indian languages, NCERT, 2006.
- The Right of Children to Free and Compulsory Education Act-2009, the Gazette of India, 2009.

- Brumfit. C (1984); Communicative methods in Language Teaching; Cambridge University press: Cambridge.
- Chomsky (1964) in Day. E. M (2002): Identity and the young English language learner; Multilingual Matters Limited; London.
- Gardner and Lambert (1972) Attitudes and Motivation in second language learning; Rowley; Newbury house.
- Jeremy Harmer, Longman Handbooks for Language Teachers, The Practice of English Language Teaching, 1998.
- Srijan1, Creative Writing and Translation, National Council of Educational Research and Training, New Delhi 2010.
- Samajh ka Madhyum, National Council of Educational Research and Training, New Delhi 2009
- Source Book on Assessment for Classed I-V, Language English, NCERT, October 2008.
- Learning Indicators till the Elementary Stage, National Council of Educational Research and Training, New Delhi 2015.
- Continuous Comprehensive Evaluation – Exemplar Package for Upper Primary Stage in English, National Council of Educational Research and Training, New Delhi 2015
- Agnihotri, R.K., Khanna, A.L. 1994. (eds.), Second Language Acquisition: Socio-cultural and Linguistic Aspects of English in India (RAL1). New Delhi: Sage Publications.
- Beaumount, M. 1996. The Teaching of Reading Skills in Second/Foreign Language. Patras: The Hellenic Open University.
- Cummins, J. and Swain, M. 1986. Bilingualism in Education. London: Longman.
- Ellis, R. 1985. Understanding Second Language Acquisition. Oxford: Oxford University Press.
- Prabhu, N.S. 1987. Second Language Pedagogy. Oxford; New York: Oxford University Press.
- Krashen, Stephen. 1989. We acquire vocabulary and spelling by reading: Additional evidence for the input hypothesis. Modern Language Journal 73:4. Pp. 440-64.
- Kumar, Krishna, 2011. The Child's Language and the Teacher, a Handbook, New Delhi, National Book trust India.

CPS 2: Pedagogy of Mathematics (Part-II)
Credits-4

Course Outcomes

After completion of this course, the pupil teacher shall

A. Recognize and implement methods for improving the quality of Mathematics learning..
B. Develop expertise in the creation, adoption and use of different types of instructional materials for effective teaching of Mathematics.
C. Critically analyze various ways of continuing professional development of mathematics teacher.
D. Explore different ways to create learning situations for different concepts of Mathematics.

Unit 1: Mathematical competency among students.   No. of classes (08)

- Exploring the learner: Identifying students' strengths and weaknesses in Mathematics learning; Remediation of weaknesses in Mathematics,
- Activities for enhancing motivation in Mathematics learning: Participation in Mathematics competitions (like Mathematics Olympiads. National Talent Search)
- Quizzes, debates and exhibitions, gamesin mathematics, Mathematics club activities, life sketches of great mathematicians,
- Developing methodology for teaching children with dyscalculia: Symptoms, Types   and Strategies of teaching.

Unit 2: Teaching Learning Materials   No. of classes (10)

- Mathematics Textbooks: Characteristics and functions of a good Mathematics Textbook,
- Evaluation of Mathematics Text books: Physical aspects, Concept loading, Presentation styles- Diagrams, Graphs, Boxes, Anecdotes, Interesting, Clarity and precision, Activities, Practice and enrichment problems
- Use of various Teaching-Learning Material in Mathematics - Charts, models, overhead projector, films with their specific use and limitations
- Mathematics Laboratory: Need, Materials in the laboratory, Setting the Laboratory,
- Functions of the Math. Laboratory

Unit 3: Professional Development of Mathematics Teachers No. of classes (10)

- Types of professional development(PD) program for Mathematics teachers:
- Courses and in-service programmes
- Mathematics Teachers association
- Journals and other resource materials , Using ICT and internet
- Professional growth—participation in Conferences/seminars/workshops; Participation in professional learning communities (PLCs) within and outside the school.

Unit 4: Pedagogical Treatment of Content   No. of classes (14)

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

• Number System, Ratio and proportion • Set, Relations, and Functions • Algebraic equations: Linear,Simultaneous and QuadraticEquations and their graphicalsolutions, Polynomials • Theory of Indices, Logarithm andAnti-logarithm • Lines and Angles, Axioms, • Triangles, Polygons and Circles, • Coordinate Geometry, • Trigonometric Ratios and Identities • Problems on Height and Distance	• 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

Transactional Strategies
- Lecture cum Discussion, audio-visual aids charts, models, power point presentations,
- Group work and its presentation on different themes be made.
- Critical analysis of the school text book and syllabus be made.
- Action research may be undertaken on innovative practices
- Visits to schools in different socio-cultural contexts may be made.

Practicum   No. of Classes-08
 Each pupil teacher has to select any two activities from the following and submit the reports.
- Observing and reporting community numeracy practices used by local society and within play or games.
- Case study on slow learners.
- Content analysis of Mathematics text book of BSE, Odisha/ NCERT.
- Preparing and presenting two PPT on any two lessons.

Suggested Readings
Anice, J. (2008). Methods of Teaching Mathematics. New Delhi: Neelkamal Publications.
Butler, C.H., Wren, F.L. and Banks, J.H. (1971).The teaching of Secondary Mathematics. New York: McGraw Hill.
Coney, T.J., Davis, G.J., and Hen Derson, K.B. (1975).Dynamics of teaching secondary school mathematics. Boston: Houghton-Mifflin Co.
Ediger, M., and Rao, B. (2000).Teaching mathematics successfully. New Delhi: Discovery Publishing House.
Kidd, P.K., Myers, S.S., Cilley David, M. (1970).The Laboratory Approach to Mathematics. Chicago: Science Research Associates Inc.
Kinney, L.B., and Purdy, C.R. (1965).Teaching of mathematics in secondary school.New York; Holt, Rinchart and Winston.
Kolb, J.R., &Bassler, O.C. (1979).Learning to teach secondary school mathematics. London: In text Educational Pub.
Kothari, R.G., and Mistry, H.S. (2012).Diagnosis of Learning Difficulties on Fractions and Decimals: A study on the students of upper primary schools. Germany: Lambert Academic Publishers.
Kothari, R.G., and Shelat, P.H. (2011).Mathematical weaknesses among secondary school students. Germany: VDM Verlag Publishers.

Kumar, S. (1993).Teaching of mathematics. New Delhi: Anmol Pub. Pvt.

Mottershead, L. (1978). Sources of mathematical discovery.Oxford: Basil black Wall.

Nickson, M. (2006).Teaching and learning mathematics: A guide to recent research and its application. London: Continuum.

Pandya, B. (2007). Teaching of mathematics. Agra: Radha Prakashan Mandir.

Paul Chambers (2008). Teaching mathematics: developing as a reflective secondary teacher. New Delhi: Sage Publication.

Rao, N.M. (2007). A manual of mathematics laboratory. New Delhi: Neelkamal Publications.

Reeve, W.D. (1954).Mathematics for the secondary school. New York: Holt, Rinehart and Winston, Inc.

Servais, W., and Varga, T. (ed.) (1971). Teaching school mathematics. A UNESCO Source Book.UNESCO, Penguin books.

Web Resources

- https://www.youtube.com/watch?v=hbDkSaSnbVM (Unit I)
- https://www.youtube.com/watch?v=IO19-MTwThI (Unit I)
- https://www.youtube.com/watch?v=MrIdc-Hs-is (Unit I)
- https://www.youtube.com/watch?v=lhwAMhZQ6kU (Unit I)
- http://mathigon.org/resources/value-of-mathematics.pdf (Unit I)
- http://mathedu.hbcse.tifr.res.in (Unit 3)
- http://www.ncert.nic.in/departments/nie/dee/publication/pdf/CCE_Math.pdf (Unit V)
- http://www.ncert.nic.in/departments/nie/niew/school_kits/kit_manuals.html
- http://nrich.maths.org
- http://www.slideshare.net/MiraculeDanielGavor/ict-tools-in-mathematics-instruction
- http://www.arvindguptatoys.com/math-magic.php
- http://karnatakaeducation.org.in/KOER/en/index.php/Portal:Mathematics
- http://www.mathcelebration.com/index.html
- http://map.mathshell.org
- http://www.cimt.plymouth.ac.uk/projects/mep/default.htm
- http://nrich.maths.org/students
- http://mathbits.com
- http://www.math-play.com
- http://www.geogebra.org
- http://classroom-aid.com/educational-resources/mathematics
- http://etc.usf.edu/math
- http://mathworld.wolfram.com
- https://www.merlot.org/merlot/materials.htm?category=2513
- http://www.ck12.org
- https://www.khanacademy.org
- http://www.learner.org/resources/browse.html?d=5
- https://blossoms.mit.edu/resources/math_resources
- Matthew J. Koehler, Punya Mishra , Mete Akcaoglu& Joshua M. Rosenberg (2013), The
- Technological Pedagogical Content Knowledge Framework for Teachers and Teacher
- Educators,
- http://cemca.org.in/ckfinder/userfiles/files/ICT%20Integrated%20Teacher%20Education%
- 20(Chapter%201).pdf
- Integrating Open Educational Resources Lesson Plan Integration Model Designed for PreService Elementary Educators Course: Mathematics Methods,

- https://currikicdn.s3-us-west 2.amazonaws.com/resource files/54d2dd15bb67b.pdf
- Teaching of Mathematics, NCERT
- http://www.ncert.nic.in/departments/nie/dse/activities/advisory_board/PDF/teaching_maths.
- pdf

<h1 style="text-align:center">CPS 2: Pedagogy of Biological Science (Part II)</h1>
<p style="text-align:right">Credits-4</p>

Course outcomes:

A. Effectively use different activities and laboratory experiments for facilitating learning of Biological sciences

B. Examine different issues and pedagogical processes in teaching Biological science at secondary level.

C. Explore different ways to create learning situations for developing different concepts of Biological science.

D. Design lessons by using constructivist approaches for effective classroom transactions in the subject of Bio-Science.

E. Analyze the importance of Professional development programmes for biology teacher.

Unit-1 Planning the process for teaching Biological science

<p style="text-align:right">Number of classes -08</p>

- Identification of concepts and unifying themes: Designing year and unit plan along with appropriate selection of learning resources
- Planning for transaction of concepts and connecting with their related concepts: across concepts/ themes; between scientific advances and the real world and outside the class.
- Designing lesson plans based on different approaches (Behaviorist and Constructivist-5E and ICON) by considering students' pace, learning styles and learning needs.
- Steps involved in developing lesson plans in 5E and ICON model.
- Concept mapping in the major areas of Biology.

Unit – 2 Learning and assessment in Biological Science

<p style="text-align:right">Number of classes -10</p>

- Learning indicators in Biological sciences and assessment of these learning indicators in the form of learning evidences/ outcome in classroom and laboratory
- Development of assessment framework on the basis of CCE: Tools and techniques for learning assessment in Biology like construction of classroom tests and unit test.
- Alternative strategies for assessment: Assignments, reports and records (laboratory record, reports of field visits and excursion, Project work report); Portfolios and Rubrics; Preparation of learners' profile.
- Recording and reporting of learning evidences/outcome: Marks and grades; Assessment as reflecting process to facilitate further learning.

Unit – 3 Pedagogical treatments in Biological science

<p style="text-align:right">Number of classes -10</p>

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

• Cell and its Organisation • Plant and Animal Kingdom • Environment and its Protection • Principles of Evolution • Principles of Genetics and Heredity	• 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

Unit-4 Issues, Challenges of Biological science and Professional development of Biology Teacher

Number of classes -10

- Changing trends in Biological science; Role of Biotechnology in society
- Democratization of science learning, Critical pedagogy (Critical theory) as basis to analyze progress in Biological science as well as pedagogy of Biology (from the perspective of economic development and politics of knowledge)
- Professional development programmes for teachers: In-service teacher training, Seminar, Conferences, participation in professional learning communities.
- Field visits of teachers to botanical garden, National parks and Collaboration with different schools, institutions of higher education and research in the fieldof Biology
- Exploration of ICT based online platforms for sharing the ideas, methods, strategies and teaching learning resources.

Transactional Strategies:
- Lecture cum Discussion, audio-visual aids charts, models, power point presentations,
- Group work and its presentation on different themes be made.
- Critical analysis of the school text book and syllabus be made.
- Visits to schools in different socio-cultural contexts may be made.

Practicum   (Number of classes-08)
Each pupil- teacher should undertake minimum two of the following:
- Construction of a unit test on any topic of Biology by developing the Blue print and appropriate test items.
- Prepare a lesson plan in 5E model on any topic of Biological science at secondary level
- Design a year plan reflecting the content and time.
- Visiting two schools and recording the learning tools available for Biology teaching.

Suggested Readings:

Fraser, B. J. and Tobin, K. G. (Eds.).*International handbook of science teaching (Part 1)*. Dodrecht, The Netherlands: Kluwer Academic.

Mintzes J., Wandersee, J. and Novak, J. (Eds.) (2000).*Assessing science understanding: A human constructivist view*. San Diego, CA.: Academic Press.

NCERT (2000).*Position paper of national focus group (NFG) on aims of education*.National Council of Educational Research and Training (NCERT), New Delhi.

NCERT (2000).*Position paper of national focus group (NFG) on education for peace.* National Council of Educational Research and Training (NCERT), New Delhi.

NCERT (2000).*Position paper of national focus group (NFG) on examination reforms*. National Council of Educational Research and Training (NCERT), New Delhi.

NCERT (2000).*Position paper of national focus group (NFG) on gender issues in education.* National Council of Educational Research and Training (NCERT), New Delhi.

NCERT (2000).*Position paper of national focus group (NFG) on habitat and learning*. National Council of Educational Research and Training (NCERT), New Delhi.

NCERT (2000).*Position paper of national focus group (NFG) on teaching of science*. National Council of Educational Research and Training (NCERT), New Delhi.

NCERT (2005).*National curriculum framework for school education*. National Councilof Educational Research and Training (NCERT), New Delhi.

Sutton, C.R. & Hayson, J.H. (1974).*Theart of the science teacher*, McGraw Hill BookCompany Ltd.

Vaidya, N. (1999). *Science teaching for 21st Century*.Deep & Deep Publication.Journal of Research in Science Teaching (Wiley-Blackwell)

Science & Children. A peer reviewed journal published by National Science Teachers Association (NSTA).

The Science Teacher. A peer reviewed journal published by National Science Teachers Association (NSTA).

CPS 3: Pedagogy of Social Science (Part-II)
Credit-04

Course Outcomes
The course will enable the pupil-teachers to:
A. State specific learning outcome for different contents of History, Geography, Political sciences and Economics
B. Explain various skills and techniques for assessment of learning outcomes on social science
C. Analyse the existing opportunities for professional development of social science teachers
D. Critically evaluate present social, political, economic, environmental and other developmental issues
E. Critically analyse various contents of social subject in relation to concept, mapping of concept, multiple application of concepts, strategies acquire concept and techniques to assess the learning outcomes.
F. State different characteristics to become a professionally competent social science teacher
G. Construct appropriate tools and techniques for assessment of the students learning outcomes in social sciences

Unit-I Human Relationships, Identities and Interaction
(Number of Classes 12)
- Issues of social change and social stratification in India: Caste, class, religion and gender
- Human-environment interaction: Location, place, region, movements and distribution of resources
- Society and political processes: Organs and functions of government, constitutional vision, electoral procedure and social movements
- Developmental issues: Resources, production, distribution, demand-supply and market mechanisms

Unit-II Professional Development of Social Science Teacher
(Number of Classes 10)
- Characteristics of social science teachers, skills and competencies
- Professional development of social science teachers: Orientation programmes and training (Seminars/conferences/symposium/workshops/panel discussion/exhibition and simulation activities like-nukad, role-play and games)

Unit-III Assessment in Social Sciences
(Number of Classes 12)
- Type and Importance of assessment in social sciences
- Continuous comprehensive assessment (CCE) in social sciences
- Quantitative and qualitative tools and techniques in social sciences (checklist, anecdotal records, observation, sociometry, rating-scale, rubrics and portfolio)
- Construction of tests: questions for testing cognitive and co-cognitive areas of learning
- Practicum Activities in social sciences (project, case study, survey, reflective diary and Action research)

Unit-IV Pedagogical Analysis of Content
(Number of Classes 10)
Each of the following contents shall be analyzed in terms of the pedagogical treatment indicated below:

Content	Aspects of Pedagogical Treatment
History • The French Revolution • Peasants and Farmers • Clothing: A social history	Pedagogical content analysis of the units with reference to: ➢ Identification of concepts and sub concepts ➢ Preparation of concept map

• Nationalism in India • Work, life and leisure • Art and Culture **Geography** • India- size and location • Drainage • Climate • Natural vegetation and wild life • Population **Political Science** • Democracy in the contemporary world • Constitutional Design • Electoral politics • Working of institutions • Democratic rights **Economics** • People as resource • Poverty as a challenge • Food security in India	➢ Determination of expected specific learning outcomes ➢ Identification of inter-disciplinary of content ➢ Methods/ Approaches/ Strategies of Teaching learning ➢ Teaching learning materials to be used ➢ Expected teacher and students experiences and activities ➢ Assessment strategies (Formative)

Transaction Modalities:
- Lecture cum Discussion method
- Narration cum discussion method
- Organization of opinion forum
- A comparative enquiry based on different socioeconomic contexts of schools could be made.
- Students should engage with sample, illustrative tools, and use of ICT to construct tests.
- Conduct and preparation of projects on various themes /contemporary social issues may be given to students in small groups.
- Action research to be conducted, case studies from different contexts to be presented in class.

Practicum   Full Mark- 25   (Number of Classes 08)
Each pupil-teacher should undertake minimum two of the following:
- Seminar presentation on themes reflecting social stratification, environmental, economic and political issues
- Submission of project, survey, action research and case study reports on suggested areas of social sciences
- Preparation of test items and testing tools
- Preparation of portfolio and rubrics
- Pedagogical content analysis report

Suggested Readings

Arora, K .L. (1976).*The Teaching of Geography*. Jullandhar: Prakash Brothers.

Bhaduri, A. (2005). *Development with Dignity: A case for full Employment*, New Delhi: National Book Trust.

Blaug, M. (1992).*The Methodology of Economics or How Economist Explain*. Cambridge: Cambridge University Press.

Bloch, M. (1990).*The Historian's Craft.* Manchester: Manchester University Press.

Broadman, D. (1985). *New Directions in Geography Education*. London: Fehur Press.

Burke, P. (1991). *New Perspectives on History Writing*. Oxford: Blackwell.

Burton, W. H. (1972). *Principles of History Teaching*. London: Methuen.

Carr, E. H. (1962). *What is History*? London: Knopf.

Carretero, M., and Voss, J. 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.

Dasgupta, P. (2007). *Economics: Avery Short Introduction*. Oxford University Press.

Dhamija, N. (1993). *Multimedia Approaches in Teaching Social Studies*. New Delhi: Human.

Drake, F. D. & Lynn, R. N. (2005).*Engagement in Teaching History: Theory and Practices for Middle and Secondary Teachers.* Columbus, OH: Pearson.

George, A. M. and Amman, M. (2009).*Teaching Social Science in Schools: NCERT's New Textbook Initiative*. New Delhi: Sage.

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

Graves, N.G. (1982). *New Source Books for Geography teaching*. Longman.

Gunnin, D. (1978). *The Teaching of History*. London: Goom Helm Ltd.

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

Huckle, J. (1983). *Geographical Educational Reflection and Action*. London: Oxford University Press.

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.

Kent, A. (Ed.) (2000). *Reflective Practice in Geography Teaching*. London: Paul Chapman Publishing Ltd.

Kochhar, S. K. (1970). *Teaching of Political Science*. New Delhi: Sterling Publishers Publishing House.

Kuhn, T. S. (1970). *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press.

Lewis, B. (1975). *History: Remembered, Recovered, Invented*. New York: Simon and Schuster, Inc.

Mehlinger, Howard D. (Ed.) (1981). UNESCO Handbook for the Teaching of the Freedom Struggle in India and Pakistan. New Delhi: Penguin India.

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

NCERT.(2006). *National Focus Group Position Paper on Teaching Social Sciences*. New Delhi: NCERT.

Root, M. (1993). *Philosophy of Social Sciences*. Oxford: Blackwell.

Sartori, G. (ED.) (1984). *Social Science Concepts: A Systematic Analysis*. New delhi: Sage Publications.

Slate, F. (1982). *Learning through Geography*. London: Butler and Tanner Ltd.

Smith, M. (2002).*Teaching Geography in Secondary Schools : A Reader*. London: Taylor& Francis.

Stanford, M. (1985).*The Nature of Historical Knowledge*. Oxford: Basic Blackwell.

Trigg, R. (1985). *Understanding Social Science: A Philosophical Introduction to the Social Sciences.* Oxford: Basic Blackwell.

UNESCO.(1965). *Source Book for Geography Teaching*. London: Longman.

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

Walford, R. (1981). Signposts for Geography Teaching. London: Longman.

Wilkins, E. J. (1979). *Elements of social Science: A Philosophical Introduction to the Social Sciences*. Oxford: Basic Blackwell.

CPS 3: Pedagogy of Physical Science (Part-II)
(Credit-4)

Course Outcome:
On completion of the course, the Pupil teachers will be able to
  A. Develop various teaching plans for teaching physical science at school level.
  B. Relate his/her role as a facilitator in enhancing Physical Science learning in the real classroom situation.
  C. Critically evaluate different ways of required learning situations according to needs and context of the learner
  D. States the concept in physical science included in the school curriculum and make pedagogical analysis of those concepts.
  E. Write the unit plan and lesson plan as per the norm of NCF-2005
  F. Prepare evaluation measures and tools for continuous and comprehensive assessment of learning in physical science.
  G. Justify various professional development programs in Physical Science for enhancement of competence of a science teacher

Unit1: Planning for facilitating Learning in Physical Science (Number of classes-12)
  - Need for planning teaching-learning experiences in Physical Science
  - Identification of Concepts and unifying themes related to Physical Science, inter-relation among various concepts in Physical Science
  - Designing of Year plan and Unit Plan in Physical Science and its significance in understanding comprehensive nature of knowledge
  - Writing learning objectives for different content are as in Physical Science
  - Planning lessons based on behaviorist and constructivist approaches-5E-model, ICON model considering learners with different pace, learning styles and learning needs
  - Planning laboratory work and ICT application in learning Physical Science

Unit2: Assessment in Physical Science   (Number of classes 9)
  - Planning for assessment framework in Physical Science

  - Learning Indicators in Physical Science

  - Tools and techniques for assessment in Physical Science : assessment of written and oral work, project work, laboratory work, field trips, journal writing, concept map

  Assessment of learners with special needs
  - Recording and reporting of learning evidences – Measurement of students' achievement in Physical Science: marks and grading, Measurement of science process skills and aptitude of learners, Rubrics, Portfolio – its role in evaluating students' performance

Unit3: Professional Development of Physical Science Teachers
(Number of classes 12)

- Need for professional development of Physical Science Teachers
- Various opportunities for teachers professional development :-interaction with peer teachers, membership of professional organization such as National Physics Teacher Association, sharing through conferences, seminars and Journals
- Collaboration with Research Institutes, Participation in professional learning community and in online forum
- Role of reflective practices in professional development

Unit 4: Pedagogical Processes and issues in Physical Science (Number of classes 7)

- Social and ethical issue related to physical science
- Inclusiveness in physical science learning
- Physical science and sustainable development
- Each of the following contents shall be analyzed in terms of the pedagogical treatment indicated in the right cell below:

Content	Aspect of pedagogical treatment
• 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, Electro- magnetic induction. • Chemical Reactions and Equation • Heat, Light and Sound	• 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

Transactional Strategies

- Lecture cum Discussion, audio-visual aids charts, models, power point presentations,
- Group work and its presentation on different themes be made.
- Critical analysis of the school textbook and syllabus be made.

Practicum

No of classes- 8

Each Pupil teacher should undertake minimum two of the following:
- Preparation of year plan and unit plan in Physical Science
- Preparation of 2 lesson plans in Physical Science-one based on behaviorist and another on constructivist approach
- Preparation of an unit test on any topic in Physical Science by developing the Blue print and the test items conforming the blue print.
- Designing pedagogical treatment for any topic of physical science and designing learning activities.
- Visit to any of the professional organization and prepare a report on the in-service professional development programmes that they organize for Science teachers
- Developing rubrics for laboratory work, assignment, field trip, project etc.

Suggested Readings

1. NCERT (2000). *Position paper of national focus group (NFG) on teaching of science*. Nationa lCouncil of Educational Research and Training (NCERT),New Delhi.
2. Steve Alsop, Keith Hicks. (2007). Teaching Science: A Handbook for Primary and Secondary School Teachers, Kogan Page,New Delhi.
3. Judith Bennett(2003) Teaching and Learning Science: A guide to recent research and its applications,Continuum,London.
4. Robin Millar (1984) Doing Science: Images of Science in Science Education, The Falmer Press, London.
5. NCERT Textbook in Physics for IX and X Students.
6. State Textbook in Physics for IX and X students. 7. Nathan S Washton (1967). Teaching Science Creatively, Saunders Company, London.
7. Novak DJ and D Bob Gowin (1984) Learning how to learn, Press Syndicate of the University of Cambridge, Ohio.
8. Carin A and B R Sund (1964), Teaching Science through Discovery, Charles E. Merrill Books Inc., Columbus Ohio.
9. Ralph Martin, Colleen Sexton, Kay Wagner, Jack Gerlovich (2000) Science for AllChildren:Methods for ConstructingUnderstanding,AllynandBacon,London.
10. SchoolScienceReview,The Association for School Education, College Lane, Hatfield, Hertfordshire,AL109 AA, UK.
11. PhysicsEducation, Institute of Physics Publishing, Dirac House,Temple Block,Bristol BS1 6BE,UK.
12. Physics Teacher, American Association of Physics Teachers, Department of Physics and Astronomy, University of Maryland, College Park, MO 20742.

SEMESTER-VII

EPC 4: Understanding the Self

Credit-02

Course Outcome

After completion of this course, the pupil-teacher shall
- A. Define the concept of 'self' and 'identity'.
- B. Critically analyse on factors that shape 'self'.
- C. Build an understanding about self as a person as well as a teacher.
- D. Reflect on one's experiences, aspirations and efforts towards becoming a humane individual and teacher.
- E. Develop effective communication skills including the ability to listen, observe etc.
- F. Build resilience to deal with conflicts at different levels and learn to draw upon collective strengths to live in harmony with one's surroundings
- G. Appreciate the critical role of teachers in promoting 'self' and students' well-being.

Theme I: Understanding of Self   (Number of Classes-08)

- Reflections and critical analysis of one's own 'self 'and identity
- Identifying factors in the development of 'self' and in shaping identity
- Building an understanding about philosophical and cultural perspectives of 'Self' and
- Developing an understanding of one's own philosophical and cultural perspectives as a teacher

Theme II: Development of Professional Self and Ethics (Number of classes-08)

- Understanding and sharing one's identity and socio-cultural, historical and political influences in shaping the professional identity
- Exploring, reflecting and sharing one's own aspirations, dreams, concerns and effort in becoming a teacher
- Reflections on experiences, efforts, aspirations, dreams etc. of peers
- Building an understanding about values and professional ethics as a teacher to live in harmony with one's self and surroundings
- Understanding the role of teacher as facilitator and partner in well-being among learners

Theme III: Developing 'Self': Teacher's Role   (Number of Classes- 08)

- Creating a situation, opportunity: Reflecting on one's own childhood and adolescent
- Reflective practices for facilitating awareness of 'self' and 'identity'
- Developing skills among learners: effective listening, accepting, positive regard, understanding body languages.

Mode of Transaction

- Workshop and individual and group experiential activities such as

- Personal narratives and storytelling, group interactions, film reviews to help explore one's self and identity. Student-teachers to engage in varied forms of self-expression such as poetry, painting and creative movements, humor, aesthetic representations, etc.

- Sharing of case studies by student-teachers, critical analysis of biographies and presentations, group readings and sessions on stories children raised in different circumstances and how this affects self and their personal and social identity formation.

- Reflective discussions on films/documentaries where the protagonist undergoes trials and finally discovers her/his potential

- Development of reflective journals/diaries by the student teachers.

- Introduction of Yoga, meditation as one of the important component to enhance student-teachers understanding of body and mind.

Guidelines for Assessment

Sl. No	Activities	Marks
1	Exploring the 'known' and 'unknown 'self in relation to what one and others know about one self and what others do not know (group activity)	5
2	Reflecting , recording and sharing of critical moments in one's life (individual activity and presentations)	10
3	Reflections on critical moments in the lives of peers (small group activity)	5
4	Exploring one's strengths, weaknesses, opportunities and threats (SWOT analysis	10
5	Group activities involving community participation	20
Total		50

Suggested Readings

Bhatt, H. (n.d.). *The diary of a school teacher.*An AzimPremji University Publication. Retrieved from www.arvindguptatoys.com/arvindgupta/diary-school-teacher-eng.pdf

Bhattacharjee, D.K (ed). (2010). *Psychology and Education – Indian Perspectives*, Section III ' Self and Growth Process' pg. 255-402, NCERT Pub

Dalal, A.S. (ed) (2001). *A Greater Psychology – An Introduction to the Psychological thoughts of Sri Aurobindo*. Puducherry, Sri Aurobindo Ashram Pub.

Delors, J. (1996). *Learning the Treasure within –Twenty First Century Education.*UNESCO Education Commission Report.

Goel, D.R. (2005). *Quality Concerns in Education.* Centre for advanced study in Education-M. S. University of Baroda

Gulati, S., and Pant, D. (2012). *Education for Values in Schools – A Framework.* NCERT Pub

Krishnamurti, J. (1998) *On Self- knowledge.* Chennai, Krishnamurti Foundation India.

Krishnamurti, J. (2000). *Education and Significance of Life.* Chennai, Krishnamurti Foundation India.

Mukunda, K.V. (2009). What did you ask at school today? A handbook of child learning, Harper Collins

Olson, D.R, and Bruner, J.S. (1996).*Folk Psychology and folk pedagogy.* In D.R. Olson & N. Torrence (Eds.), The Handbook of Education and Human Development (pp. 9 - 27), Blackwell

EPC 5: Arts in Education

Credit-02

Course Outcome
After completion of this course, the student teacher shall
   A. Express ideas and emotions about different aspects of life through different art forms.
   B. Appreciate and distinguish different art forms.
   C. Develop aesthetic sensibility among learners about the good and beautiful environment, including classroom, school, home and community through an integrated learning approach.
   D. Integrate the knowledge of art with daily life through learning with different media and techniques by using creative expression and making objects of common use.
   E. Create awareness about the rich cultural heritage of their own locality/state/region as well as that of the nation.
   F. Explore the life and work of artists and their contribution to teaching and learning.

Theme 1: Forms of art   (Number of Classes-08)
   - music, dance, theatre and visual arts
   - appreciate different art forms
   - integration of art forms in classroom process
   - analyse text books for integration of different art forms

Theme 2: Expression through art forms   (Number of Classes-08)
   - Expressing ideas about different aspects of life
   - Expressing various emotions
   - Enhancing communication and presentation skills, developing imagination, creativity and aesthetic sensibility among the student teachers
   - Utilizing different art expressions in teaching learning situation

Theme 3: Cultural heritage of India   (Number of Classes-08)
   - Exposure to the cultural heritage of
   - Locality
   - state/region
   - nation
   - Reflection and incorporation of the rich cultural heritage during the celebrations of festivals, functions and special days
   - document processes of an art or craft form from the pedagogical point of view; such as weaving or printing of textiles, making of musical instruments, folk performances in the community
   - Acquaintance with the life and work of artists and their contribution to teaching and learning.

Guidelines for Assessment

Sl No	Activity	Marks
1	Presentation on anyone art form	10
2	Textbook analysis to find out integration of art forms	5
3	Prepare a lesson incorporating one or more artistic expression	15
4	Documentation of any one heritage art form	10
5	Write up on life and work of any one artist (local or national)	10
Total		50

Suggested Readings

Position Paper- National Focus Group on Arts, Music, Dance and Theatre NCERT, 2006, New Delhi

Position Paper- National Focus Group on Heritage Crafts, NCERT, New Delhi, 2006 NCF 2005

NROER- National Repository of Open Educational Resource, Department of School Education &Literacy, MHRD.

The following NCERT books may also be referred to

Living Craft tradition of India (Textbook in Heritage Crafts) NCERT

Exploring the Craft Tradition of India NCERT

BharatiyaHastakalakiParamparayen, NCERT

An Introduction to Indian Art, NCERT

BharatiyaHastkalaParamparakiKhoj, NCERT

Craft Tradition of India (Textbook in Heritage craft for class XII)

Art Education- Teachers' Handbook for Class I, II, III, IV, V, VI, VII, VIII, IX

Source Book on Assessment for Classes I- V, Art Education

EPC 6: ICT Practicum

Credit-02

Course outcome

After completion of this course, the student teacher shall
   A. Apply different ICT tools in teaching-learning process.
   B. Develop awareness and exposure to different ICT tools and resources.
   C. Design ICT based lesson plan for classroom transaction.
   D. Evaluate teaching-learning process using ICT.

Theme1: Exposure on hardware/software   (Number of Classes-07)

- Hands on experience in setting up a desktop/PC and working with various input devices, output devices, storage devices, and display devices
- Practicing word processing using Indian language software
- Using word processor, spread sheet, and presentation software to produce various teaching learning resources.

Theme2: Awareness and exposure to ICT Tools   (Number of Classes-07)

- Locating internet resources – navigating, searching, selecting, saving and evaluating (use standard internet evaluation criteria)
- Creating screen cast video of a lessons, Embedding Audio , Video With Photos
- Embedding Animations and Transitions Uploading You Tube Video (Using Movie Maker Software) 72
- Shooting, editing, and sharing of videos segment on any educational topic
- Creating a podcast using audacity and sharing it on podcasting site

Theme3:- Developing ICT based lesson Plan   (Number of Classes-05)

- Creating technology based lesson plan
- Developing lesson plan by using 5E Model and ICON Model and ICT
- Creating e-content

Theme 4:- Use of ICT in Assessment and management (Number of Classes-06)

- Creating e-portfolio
- Creating data base of group of students
- Creating and using rubrics for assessment (online, offline)
- Connecting with parents and community through ICT
- Any other activity may also be taken up as per the experience and expertise of the resource person.

Guidelines for assessment:

Sl No	Activity	Marks
1	Preparing a document using word / PPT	10
2	Create a documentary file	10
3	Design a project using e portfolio	10
4	Develop an e-content and share it using blog/Wikipedia/word press/YouTube	10
5	Create a data base for student management system	10
Total		**50**

Suggested Readings

Ahmad, J., Ahmad, M.S. and Khan, A. (2012), *Computer Applications in Education*, Neelkamal Publication, Hyderabad,PP-288, ISBN: 978-81-8316-293-7.

Bharihok, D. (2000). *Fundamentals of Information Technology*. Pentagon Press: New Delhi.

CEMCA (2014).*Technology Tools for Teachers*, Commonwealth Educational Media Center for Asia, 13/14 SarvaPriyaVihar, New Delhi.

David, M. (2009).*Project Based Learning- Using Information Technology*- Second Edition. Viva Books: New Delhi.

James, K.L. (2003). *The Internet: A User's Guide*. Prentice Hall of India Pvt. Ltd: New Delhi.

LaxmanMohanty, NeeharikaVora (2008). *ICT strategies for schools- a guide for school administrators*. Sage Publications: New Delhi.

Dash, M.K. (2010). *ICT in teacher development*, Neel Kamal Publications: New Delhi

EPC 7: Reading and Reflecting on Texts

Credits-02

Course Outcomes

After completion of this course, the student teacher shall

A. Develop proficiency in reading and responding to written texts.
B. Examine and appreciate authentic literary and non-literary texts.
C. develop study and reference skills
D. Reflect on the ideas expressed in the texts.
E. Plan, draft, edit and present a piece of writing related to their understanding of a text.

Unit 1: Stories and excerpts from narratives (any one or more)

(Number of Classes-08)

- *How I Taught My Grandmother to Read and other Stories*- Sudha Murthy-Puffin. Books, 2004
- *Tales from the Indian Jungle*-Kenneth Anderson- Rupa& Co. 2001
- *Tales of the Open Road*- Ruskin Bond- Penguin UK-2006
- *Encounters with Animals*- Gerald Durrel-Penguin-2012

Excerpts from the following:

- *The Diary of a Young Girl:Anne Frank,* Random House.
- *The man who planted trees*- Jean Giono, Chelsea Green Pub.
- *'I have a Dream'*Texts of speech delivered on Aug 28, 1963-Martin Luther King

- (Text and You tube version available.)

Unit 2: Essays /Excerpts from literary texts (any one or two)

(Number of Classes-08)

- *The Elephant, the Tiger and the Cellphone*-Shashi Tharoor, Penguin, India.
- *Nine Lives- In Search of the Sacred in Modern India*- William Dalrymple, Bloomsbury, Londo*n.*
- *Running in the Family*- Michael Ontage, Bloomsbury, London.
- *Interpretor of Maladies* – (Title Story)–JhumpaLahari, Mariner Books.

Unit 3: Essays /Excerpts from Educational and Scientific Texts (Choose any three)

(Number of Classes-08)

- *Medium of education* (The selected works of Gandhi- Vol.6), Navajeevan Publication.
- *A Brief History of Time*- Stephen Hawking, Random House.
- *Fall of a Sparrow*- Salim Ali, Oxford.
- *Education and world peace. In Social responsibility, (Krishnamurti, J.) Krishnamurti Foundation.*
- *National curriculum framework – 2005. NCERT*
- *Civilization and progress. In Crisis in civilization and other essays. (Tagore, R.) Rupa& Co.*
- *RTE Act, 2009*

Guidelines for Assessment

Sl no	Activity	Marks
1	Narrating any one story selected from Unit 1in own words; writing the summary of the story, extrapolation of the story; discussion on the ideas expressed	10
2	Converting any one situation from the text specified under Unit 1 into a dialogue followed by role-playing	10
3	Interpretation of the text, reflecting on the key ideas exposed in the texts specified under Unit 2 and preparing a write up based on any one text	10
4	Reflection on the ideas expressed in the selected essays/ excerpts specified under Unit 3	10
5	Seminars and open forum for discussion based on themes related to selected texts from Unit 3	10
Total		**50**

EF-1: School Exposure (Multicultural Placement)

Credit-02
Duration- 2 Weeks

Course Outcome

After completion of this course, the pupil- teacher shall

A. Select different type of schools such as urban, rural, tribal, schools for challenged learners etc.
B. Connect to school activities with different cultures/set up.
C. Develop the process of engaging students in classrooms through observing the practice adopted by regular teachers
D. Develop understanding to manage a substitute(arrangement class)
E. conduct classroom activities
F. Conduct case studies

The institute will identify suitable number of cooperating urban schools, rural schools, and tribal schools, and students will be placed by rotation in all the three types of schools. All activities listed below are to be completed within two weeks during the placement of student teachers in three types of schools in rotation. Each pupil teacher performs the following activities under the guidance of supervisor/mentor and prepares reports on all the activities. The report will be assessed as the guideline given below.

Guidelines for Assessment

Sl. No	Activities	Marks
1	Observing 10 lessons 5 in each method delivered by regular teachers with the help of observation schedule	10
2	Observation of day-to-day school activities and preparation of comprehensive report highlighting working of the library, co-scholastic activities, games and sports, functioning of laboratory, school morning assembly and preparation of reflective report	05
3	Availing at least 5 substitute teaching opportunities in actual school situation	10
4	Developing 4 lessons (two lessons in each method subject) and use of learning materials/teaching aids and one unit plan.	(10+5) =15
5	Undertaking a case study of student/ institute and reporting	10
Total	50	

EF-2: School Internship

Credit-10

Course Outcomes

- To develop the ability to define clearly the general and specific objectives of teaching the subject, the different units, and the individual lessons.
- To develop the ability to select units and subject matter suitable to the class, and resource material and aids - readymade, improvised - suitable to the units.
- To develop the ability to plan the lesson effectively with an understanding of the principles of learning and organize the subject matter suitably indicating the appropriate techniques and aids to be used at each stage and for each purpose.
- To develop the ability to prepare the pupils adequately for each lesson and develop it in ways most suitable to the occasion and most appropriate for realizing the objectives set forth.
- To develop the ability to motivate the pupils sufficiently and sustain their interest as well as maintain discipline in the class.
- To develop the ability to adjust the programme to the varying needs interests and abilities of the pupils, while making for maximum group progress.
- To develop the ability, to use different methods and techniques of teaching and use them effectively in appropriate situations.
- To develop the ability to plan the details of the curriculum with the pupils (teacher pupil planning) and work out resource units, spelling out the experiences, activities, aids, techniques, etc.
- To develop the ability to develop and apply different techniques and tools for the continuous evaluation of the achievement and progress of the pupils, taken as individuals and as a group, especially the ability to construct and use oral, written and performance tests.
- To develop the ability to judge the effectiveness of teaching and the success of each programme in relation to the goals, from the participation and performances of the pupils.
- To develop the ability to diagnose the strengths and weaknesses and the achievements and failures of the individual pupils, in relation to the objectives and decide, plan and organize the reinforcement of remedial assistance needed by each.
- To develop the ability to correlate his subject and its teaching with other subjects taught in the class, with other activities in the school with life, so that, the education of the child becomes an integrated programme.
- To develop the ability to plan, organize and guide enrichment activities and field programmes related to the subjects taught.
- To develop the ability to plan, organize and guide various co-curricular activities, which are considered as important constituents of a rich education for the citizens of tomorrow.
- To develop the ability to see the school as organized centre of the community and relate the provisions and practices in the school to the needs and conditions of the pupils and of the community.

Duration 16 Weeks

16 weeks internship shall be carried out during the third semester. The student teachers are required to be placed in the schools selected by the Institute. The number of student teachers

to be allotted to a particular school shall be 10-12 or as decided by the institute. The institute may appoint a senior faculty as coordinator of the entire programme, who, *inter alia*, would identify and allot schools to student teachers, and maintain liaison with the schools. In addition, a separate coordinator may be appointed for each state knowing the regional language of the respective state.

Nomination of Mentor Teachers The internship coordinator/s while visiting the schools for identification purposes, would seek information about different teachers of the schools, who may be nominated as mentor teachers. The role of the mentor teacher would be to share his/her professional experiences, present model lessons, assess student teachers' performance, and provide on-site guidance and support during internship.

Identification of Supervisors

The faculty members of the institute would be allotted to different schools as supervisors during the internship period. Along with the names of the faculty members, the subject/subjects to be observed and the schools for observation may be written. A chart depicting the names of the internship schools, names of student teachers, name (s) of faculty members (supervisors), and the dates of visit shall be prepared and notified by the coordinator every week. The supervisor shall coordinate the activities of the mentor teacher of the school; and assess student teachers' performance, and provide on-site guidance and support during internship.

The institute will:

1. Provide Internship handbook to the internship schools
2. Organize orientation cum -consultation meetings with the school principals and mentors teachers
3. Develop supplementary material for additional activities in collaboration with mentor teachers
4. Hold fortnightly review meetings with mentor teachers
5. Hold follow -up meetings with student -teachers at regular intervals in the TEI.
6. Monitor implementation of internship including observation of practice teaching.
7. Assess, in collaboration with school mentor -teachers, the internship performance of student -teachers.

Student teachers shall undertake the following activities during the internship period:

I. Planning and Facilitating Teaching Learning

➢ Unit/ Lesson planning
➢ Classroom teaching in two school subjects
➢ Lesson observation of mentor teacher and peers
➢ Developing and Using Teaching Learning Resources
➢ Integrating ICT in regular teaching

II. Assessment, Remediation and Action Research

➢ Preparation of CCE activities including unit tests
➢ Preparation of diagnostic tests and identifying learning difficulties
➢ Planning and executing remediation
➢ Conducting action research

III. Understanding School Context

➢ Prepare Profile of the school (Type of School/infrastructure, facilities teachers, students and community information)
➢ Analyze Learner Performance(One class)

IV. Participation in School Activities
➤ Organize all types of curricular activities, e.g. sports and games, debate, song, art, music, painting

V. Community and school Activities
➤ Survey of households in local community
➤ Interaction with SDMC/SMC/PTA/MTA members
➤ Interacting with parents

The 16 week school internship will be organized in three phases: (i) pre internship; (ii) internship (iii) and post internship

Phas Phase-1: Pre internship

The pre internship will be of one week duration during which necessary orientation programmes for Mentor Teachers and Heads of the selected schools will be organized in the institute. The following activities shall be organized during pre-internship phase:
➤ Orientation of the mentor teachers and Heads of the schools regarding the objectives and different aspects of internship in teaching
➤ Orientation about the roles and responsibilities of different personal involved in internship in teaching specially roles of mentor teachers/HM/Principal
➤ Discussion on process involved in unit planning/ lesson planning
➤ Discussion on process of developing achievement test and its administration and uses
➤ Discussion on records to be maintained by student teachers during internship.
➤ Orientation about process of giving constructive feedback to student teachers
➤ Demonstration of model lessons by the experts/supervising teacher followed by discussion, preferably in DMS
➤ Demonstration and criticism lessons of at least 2 lessons, by the student teachers, of their peers in each subject followed by discussion

Phase-2: Internship

Every student teacher shall undergo an internship of 15 weeks in an identified school. During this period the student teacher shall be attached to a school and he/she shall undertake such duties as are assigned to him / her by the Head Master/Principal of the school in all school related activities. During this period, he/she shall teach at least 120 lessons in the school, taking equal number of lessons from each of his/her pedagogy subjects, under the supervision of the mentor teacher and respective teacher educator (s) from RIE. The first week will be utilized for developing rapport with school (Students, teachers, Principal/Head Master/other staffs, etc.) and familiarity with school system.

Practicum during Internship

Student teachers shall perform the following during internship:
➤ Prepare 120 lesson plans in two school subjects and deliver at least 60 lessons in each subject
➤ Integrate student assessment activities with teaching learning process
➤ Development and use learning resources related to pedagogy courses
➤ Observation of peer teaching: 10 in each school subject
➤ Observation of teachers' lessons: 5 in each school subject
➤ Develop, administer, score and analyze at least 2 unit tests: one in each school subject
➤ Conducting action research based on real classroom problems
➤ Prepare and maintain student portfolios
➤ Preparation of the school time table

- Organize and participate in: morning assembly, literary and cultural activities , Club activities, Exhibitions, Excursions and field trip, Mock parliament, Quiz, Games and sports and PTA/SMC meetings
- Maintenance of school library and laboratory
- Maintaining a reflective diary of his/her school experience

Records to be submitted

Lesson plans/ Unit plans
- School profile: infrastructure; Social Science Laboratory - physical facilities, Equipment, School Library- facilities
- Record of Participation/organization of school activities

Record of observation of peer teaching
- Record of observation of class of regular teacher/mentor teacher
- Report of action research
- Assessment record
- Reflective Journal

Phase – 3: Post Internship

The post internship is required to be organized in the Institute for one week just after completion of internship in teaching programme. The following activities shall be organized in the Post Internship phase:
- Preparation of brief report by each student teacher on his/her internship experiences.
- Presentation of the reflections of internship by student teachers, which will be conducted in smaller group/subject wise and assessed by the supervisors.
- Some of the video clippings of lesson delivering developed earlier during internship will be shown for critical reflection
- Inviting feedback from cooperating schools/mentor teachers/HM/Principal/institute faculty.

Internal Assessment

The assessment of the performance of student teachers shall be based on the feedback received from all associated with the programme, including mentor teachers/HM/Principal, peers, supervisors of the institute; and various records submitted by the student teachers

The weightage to different components of internship shall be assigned as under:

Component	Minimum Number	Maximum Marks	Internal-by the faculty of the Institute	External by the Mentor School Teachers and Head Teachers
Demonstration and criticism classes by student teachers in group (16-17 students in group)	2 criticism lesson (1 in each pedagogy course)	10 (5+5)	10	--
Observation record of classes	10 (05 in PC-1 and 05 in PC-2)	10(5+5)	10	--

taught by **mentor** teachers/regular teachers				
Unit Plan	2 in each subject/pedagogy	10 (5+5)	10	--
Lesson Plan (PC-1)	50 Lesson Plan 10 Lesson Notes	10	10	--
Lesson Plan(PC-2)	50 Lesson Plan 10 Lesson Notes	10	10	--
Classroom observation record of peers	20 Lesson (10 in PC-1 and 10 in PC-2)	10 (5+5)	10	--
Records of participation/organization in curricular activities	1	10	10	--
Records of school profile	1	10	10	--
Action Research	1	20	20	--
Student Assessment Records	2 (one for each subject)	20 (10+10)	20	

Teaching Learning Resources	All	10 (5+5)	--	10
Reflective Diary	1	10	10	--
Assessment by mentor teacher(s)/HM/Principal /Inst supervisors based on overall performance in school including teaching and participation in other school activities	60 lesson in PC-1 and 60 lesson in PC-2	80	40= (PC-1(20)+ PC-2(20)	40= (PC-1(20)+ PC-2(20)
Overall Assessment of Trainee by Head Teacher/Principal		10	--	10
Presentation of reflections on internship experiences (Post Internship)		20	20	--
Total for III Semester		250	200	50

SEMESTER-VIII
PE 6: Creating an Inclusive Classroom

Credit-04

Course Outcome
The course will enable the student teachers to –
A. State the significance of Inclusive education
B. Evaluate different Policy and legislative frameworks promoting inclusion
C. Create inclusive classroom using inclusive pedagogy(Teaching strategies, CCE)
D. Explore different educational Strategies addressing learner's diversity
E. Compare and differentiate among various concept like impairment, handicapped, disability, retarded

Unit 1: Understanding Inclusion in Education   (Number of Classes-08)
- Children with special Needs
- History of inclusion –paradigm shift from segregation to inclusion
- Policy perspective: Initiatives to promote inclusive education- equity and equality
  - International Focus: Salamanca 1994, UNCRPD, EFA (MDG)
  - National Focus: Constitutional obligations for education of diverse groups, RTE 2009, NPE, 1986-92, PWD Act 1995 and revised PWD Bill 2012, NCF 2005

Unit 2: Understanding diversity for inclusive education
                                                          (Number of Class-08)

- Diversity due to disability (Nature, Characteristic and Need
- Diversity due to socio- cultural and economic factors

- Special needs of children arising due to language difference, gender, class, caste, religion and other factors
- Discrimination - stereotyping, prejudices; issues, concerns and intervention

Unit 3: Addressing Learners' Diversity   (Number of Classes-08)
- Curricular Issue
  - Assessment and Evaluation-- Continuous Comprehensive Evaluation (CCE)**,** Alternative means for assessment and evaluation in inclusive education/practices
- Learning and learner support--assistive and adaptive devices, ICT
- Universal Design for Learning (UDL)

Unit 4: Inclusive School   (Number of Classes -08)
- Barriers for inclusion in school- Psycho-social, infrastructural
- Concept, dimension and features of an inclusive school
- Developing an inclusive school- creating inclusive culture in community, producing inclusive policies and evolving inclusive practices

Practicum
Each student will carry out any one of the activities, submit a report and face viva examination to be conducted by both internal and external examiners.
- Conduct a survey on special school for visually challenged students and present best practices of any special school.
- Conduct a survey on inclusive school and present pedagogy of learning used for children with disabilities.

- Present a report on assistive technology used for children with special needs used in any school.
- Prepare a report on contribution of different committees and commission with regard to special education.

Mode of Transaction
- Lecture cum discussion method
- Question and answer method
- Computer assisted learning'
- Activity based learning

Suggested Readings

Ainscow,M. and Booth, T (2002). *Index for Inclusion: Developing Learning and Participation in Schools.* Bristol: CSIE.

Ainscow, M., Dyson, A. and Booth, T. (2006) Improving Schools, Developing Inclusion, London: Routledge.

Hegarty, S. and Mithr, A. (2002). *Education and Children with Special Educational Needs-Segregation to Inclusion,* New Delhi: Sage Publication India Pvt. Ltd

Julka. A, (2012). *Index of Incusion.* NCERT, New Delhi.

Jha.M. (2002). *Inclusive Education for All: Schools Without Walls,* Heinemann Educational publishers, Multivista Global Ltd, Chennai

Julka, A. (2006). *Meeting special needs in schools" A manual,* NCERT, New Delhi

UNICEF (2003*) Examples of Inclusive Education,* UNICEF ROSA, Kathmandu

World Bank (2003). *Inclusive Education: Achieving Education for All including thosewith Disabilities and Special Educational Needs.*

Ysseldyke, J.E. and Algozzine,B. (1998) *Special Education A Practical approachfor Teachers,*New Delhi: Kanishka Publishers Distributors.

Julka,A.(2014*). Including Children with Special Needs: Primary Stage*

Julka,A.(2015). *Including Children with Special Needs: Upper Primary Stage*

Julka,A. (2014*). Teachers Creating Inclusive Classrooms: Issues and Challenges – A Research Study*

NCERT (2006). *Position Paper: National Focus Group on Education of children withSpecial Needs,* NCERT; DEGSN, New Delhi

NCERT (2006), *Position Paper: National Focus Group on Problems of ScheduledCastes and Scheduled Tribe Children,* NCERT, DEGSN, New Delhi.

MHRD (2009), *The Right of Children to Free and Compulsory Education Act, 2009.* Ministry of Human Resource Development, New Delhi

PE 7: Educational Planning, Management and Leadership
Credit-04

Course Outcome
On completion of this course, the pupil- teachers shall be able to
A. Describe the concepts, types and approaches of educational planning
B. Evaluate various recommendations of different five year plans relating to school education
C. Elaborate the concept of educational decentralization in India and districtplanning practices
D. State the concept, nature and approaches of educational management
E. Explain different skills in managing material and human resources ofschool
F. Evaluate different managerial and leadership styles foreffective management of a school.

Unit-1 Understanding Educational Planning   (Number of Classes-10)
- Educational planning: Meaning, Nature,
- Traditional educational planning and strategic educational planning-steps and benefits
- Approaches to educational planning: Social demand, manpower requirement and costbenefits
- Planning for human resource development in school: Manpower forecasting andManpower planning
- Institutional Planning: School development plan as per the RTE Act 2009

Unit-2 Educational Planning in India   (Number of Classes-10)
- Beginning of five year Plans: its historical background; Main features of five year plans with special reference to education, Impact of five year plans on education. 12th Five year plan: Major recommendations relating to school education
- Educational decentralization in India: legal provisions and institutional framework
- District planning under the on-going country-wide education development programmeslike the SSA and the RMSA

Unit-3 Educational Management: Concept, Processes (Number of Classes-10)
- Concept of educational management: Concept and Process; Planning, organization, control ,decision making and evaluation
- Approaches to management
- Management of material resources and human resource
- Management of Teaching Learning Activities-office management, time management, management of examination

Unit-4 Leadership: Concepts and Styles   (Number of Classes-10)

- Leadership: Concept, types-administrative and instructional
- Educational administration leadership skills: Decision making, Planning and Co-Coordinating, Communicating, Evaluating and Feedback
- Styles of educational leadership: autocratic, Laissez-faire and democratic

Mode of Transaction-

- Lecture cum discussion method
- Question and answer method
- Computer assisted learning'
- Activity based learning

Practicum   (Number of Classes-08)

Each student will carry out any one of the activities, submit a report and face viva examination to be conducted by both internal and external examiners.

- Read school development plan of elementary schools and prepare reflective notes on it.
- Prepare report after collecting views of SMC members about their contribution to school improvement.
- Prepare a report on district educational planning of your district.
- Interact with five HMs/Principals of nearby schools and prepare a report on management of material and human resources.
- Make a case study on one HM/principal of a school; his/her Leadership quality and styles and prepare a report.

Suggested Readings:

Ayyar, R.V. Vaidyanatha (1993). Educational Planning and Administration in India: Retrospect and Prospect. *Journal of Educational Planning and Administration,* VII (2): 197-214.

Blaug, Mark (1972). An *Introduction to Economics of Education.* The Penguin: London.

Bray, Mark and N.V. Varghese (ed.) (2010): *Directions in Educational Planning: Report on an IIEP Symposium.* IIEP: Paris.

Brown, D. (1990): *Decentralisation and School-based Management*. Falmer Press: London.

Bullock, A. and H. Thomas (1997). *Schools at the Centre? A Study of Decentralisation.* Routledge: London.

Bush, T., L. Bell, R. Bolam, R. Glatter and P. Ribbins (eds.) (1999). *Educational Management: Redefining Theory, Policy and Practice*. Paul Chapman: London.

Carron, Gabriel (2010). *Strategic Planning: Concept and Rationale*. IIEP Working Paper 1. IIEP: Paris.

Carron, Gabriel (2010). *Strategic Planning: Techniques and Methods*. IIEP Working Paper 3, IIEP: Paris.

Chau, Ta-Ngoc (2003). *Demographic Aspects of Educational Planning.* IIEP: Paris.

PE 8: Schooling, Socialization and Identity

Credit-04

Course Outcomes

On completion of this course, the pupil- teachers shall be able to

- A. State the major socializing agencies.
- B. Explain self-identity formation process.
- C. Evaluate how gender based violence existing all space.
- D. Create some model or plan for addressing issues like gender-based violence.
- E. Analyse about evolutionary status of teaching profession and teacher's identity.

Unit I: Socialization and development of self   (Number of Classes-10)

- Understanding the nature and processes of socialization

  - ➤ At home: family as a social institution; impact of parenting style/child rearing practices; transmission of parental expectations and values;
  - ➤ In the community: neighbourhood, extended family, religious group and their socialization functions
  - ➤ At school: impact of entry to school; school as a social institution; value-formation in the context of schooling;
- Understanding interface between home, community and school; inter-linkageswithin wider socio-cultural context
- Various dimensions of self and the impact of socialization on development ofself

Unit II: Emergence of 'person' and 'identity'   (Number of Classes-10)

- Understanding 'identity formation'; emergence of multiple identities in the formation of a person placed in various social and institutional contexts; the need for inner coherence; managing conflicting 'identities'.
- Determinants of identity formation in individuals and groups: Social categories such as caste, class, gender and religion
- The influence of peer group, media messages, technology, and globalization on identity formation in contemporary society

Unit III: Socialization Processes and Social Complexities

(Number of Classes-10)

- Concept of Gender, Patriarchy, Masculinity and Femininity
- Gender Bias, Gender Stereotyping and Women Empowerment
- Gender Identities and Socialization Practices in different types of families in India.
- Gender Issues in Curriculum: Issues and Concerns of Transgender
- Addressing violence and sexual abuse in family, Neighbourhood and School and in other formal and informal institutions.

Unit IV: Evolving identity as a teacher   (Number of Classes- 10)

- Teacher's 'professional identity; Meaning and various dimensions
- Teacher identity formation: Role of pre-service and in-service teacher education programmes
- The impact of one's own socialization processes; awareness of one's own shifting identities as 'student', 'adult' and 'student teacher', and influences

that have acted/continue to act on oneself
- Reflections on one's own aspirations and efforts in becoming a 'teacher'

Mode of Transaction-
- Lecture cum discussion method
- Question and answer method
- Computer assisted learning'
- Activity based learning

Practicum   (Number of Classes-08)
Each student will carry out any one of the activities, submit a report and face viva examination to be conducted by both internal and external examiners.

- Submission of a report on t h e influence of peer group, media message,technology, and globalization on identity formation in contemporary society
- Prepare and present a term paper on Issues and Concerns of Transgender.
- Prepare a report with reference to Women Role models in various fields with emphasis on women in unconventional role.Collection of Folklores about Socialization Processes and its Influence on Identityformation.
- Visit to organizations connected with peace and inter cultural harmony and aesthetic appreciation to experience peace as reality and submission of report.

Suggested Readings

Amalendu Misra, (2004). Identity and Religion Foundations of Anti-Islamism inIndia. Sage Publications, New Delhi

Butler, J. (1990). *Gender Trouble: Feminism and the subversion of Identity*. NewYork; Routledge.Chap. 6: Parents and Teachers

Desai, Neera and Thakkar, Usha. (2001). Women in Indian Society. National Book Trust, New Delhi

Dipankar Gupta (Ed.) (2004). Caste in question Identity or Hierarchy. Sage Publications, New Delhi.

Dunne, M. et al. (2003). Gender and Violence in Schools. UNESCO.

Kamala Ganesh &UshaThakkar (Ed.) (2005). Culture and Making of Identity in India,Sage Publications, New Delhi.

Kirk Jackie e.d. , (2008), Women Teaching in South Asia, SAGE, New Delhi

Krishnamurti, J., Education and the Significance of Life, KFI Publications

Kumar Krishna (2004), What is Worth Teaching? 3 edition, Orient Longman

Kumar, K.(2001) *Prejudice and Pride: School Histories of the Freedom Struggle.* New Delhi: Viking/Penguin.

Leach, Fiona. (2003). Practising Gender Analysis in Education, Oxfam

National Curriculum Framework 2005: Position Paper, National Focus Group on Gender Issues in Education, 3.2, NCERT, 2006.

Nayar, Sushila and Mankekar Kamla (ed.) 2007, 'Women Pioneers in India's Renaissance, National Book Trust, New Delhi, India.

NCERT (2014). Scholling Socialisation and Identity. NCERT, New Delhi.

Pathak, Avijit (2002), Social Implications of Schooling, Rainbow Publishers, Delhi

Saraswati, T.S. (Ed.) (1999). Culture, Socialization and Human Development.Theory: Research and Applications in India, Sage Publication, New Delhi.

SenAmartya (2006). Identity and Violence. The Illusion of Destiny. Allen and Lane:

Penguin Books India Pvt. Ltd. New Delhi.

Sharma, R &E. Annamalai. (2003). *Indian Diaspora: In Search of Identity.* Mysore:CIIL.

Shashi Tharoor (2007). The Elephant, the Tiger &the Cell phone. (Particularly parttwo of the book).Penguin Viking, New Delhi.

Sherwani, Azim. (1998). the girl child in crisis. Indian Social Institute, New Delhi.

Srinivas M.N., (1986). Social Changes in Modern India, Allied Publishers, Bombay.

SrivastavaGouri, (2012), Gender and Peace in Textbooks and Schooling Processes, Concept Publishing Company Pvt. Ltd, New Delhi

UNICEF (2005). 2005 and Beyond – Accelerating Girls' Education in South Asia. Meeting Report.

Unterhalter, Elaine. (2007). Gender, Schooling and Global Social Justice, Routledge.

Vidyanathan, T.G. (1989), 'Authority and Identity in India', in 'Another India'Daedalus, Fall, 118 (H): 147-69.

PE-9 Vision for Indian Education

Credit-04

Course Outcome

On completion of this course, the pupil- teachers shall be able to

- A. Explain major recommendation of different committees and commission with regard to school education.
- B. Critically analyse different social issues that effects the schooling system and process.
- C. Evaluate the role and responsibilities of different national and international organization in the field of education.
- D. Develop a futuristic model about future school system.
- E. Explore innovative strategies relevant to future school education.

UNIT 1 - Development of Education in India: Historical perspectives
(Number of Classes-10)

- Evolution of education in India in Vedic and Post Vedic period: its relevance to present education
- Educational development in the Pre-independence period-Macaulay' minutes, Woods Despatch, Hunter Commissions, Basic education
- Education in Post-Independence Period: University Education Commission (1948) Secondary Education Commission(1952) Education Commission (1964-66);NPE 1968;NPE 1986 and its modified version 1992;

Unit- 2 Education; concerns and issues   **(Number of Classes-10)**

- Universalization of Elementary Education: Structure, aims and Its importance for national development
- Policy initiatives for universalizing elementary education: DPEP, SSA, RTE Act 2009, Padhe Bharat Badhe Bharat
- Secondary education: Concept, need and importance for national development, Policy initiatives for secondary education: RMSA, ICT @ school, Rashtriya Avishkar Abhiyan,
- Issues of quality and equity in secondary and higher secondary education and strategies, vocationalisation of secondary education; process, strategy and policy initiative.

Unit-3: Global Perspectives in School Education   **(Number of Classes-10)**

- International Commission on education: Learning to be 1975, learning the treasure with in 1966 with reference to Delor Commission Report.
- Role of International agencies for development of education- UNICEF, World Bank, UNESCO.
- Global monitoring report on Millennium Development Goal (MDG) and sustainable development goal(SDG)
- World Education Report 2015 and its relevance for school education in India.

Unit 4: Developing Vision for Education   **(Number of Classes-10)**

- Formulating vision and mission for a new social order: Conceptualizing future school, teacher, curriculum, methods and evaluation
- Promoting Innovation for quality school education in the areas like Curriculum/Methods of Teaching/Management and Administration/ Examination. Emerging challenges in school organization, curricular process and learning climate.

Mode of Transaction-
- Lecture cum discussion method
- Question and answer method
- Computer assisted learning'
- Activity based learning

Practicum   (Number of Classes-08)

Each student will carry out any one of the activities, submit a report and face viva examination to be conducted by both internal and external examiners.
- Prepare and present a report on relevance of Vedic/ Buddhist/ Islamic educational ideas forpresent school education by studying original literature.
- Conduct surveys in the local area for examining status of implementations of the RTE Act 2009 and submit the report.
- Visit five secondary schools nearby and prepare report on quality of teaching and learning as per RMSA guidelines.
- Read any one educational project sponsored by the UNESCO and present in the class

Suggested Readings
Arial, J.C. &Agrawal S.P. (1992).Role of UNESCO in Educational, Vikas Publishing House, Delhi.

Anand, C.L. et.al. (1983). Teacher and Education in Emerging in Indian Society, NCERT, New Delhi.

Govt. of India (1986). National Policy on Education, Min. of HRD, New Delhi.Govt. of India (1992).Programme of Action (NPE).Min of HRD.

Mani, R.S. (1964). Educational Ideas and Ideals of Gandhi and Tagore, New Book Society, New Delhi.

Mistry, S.P. (1986).Non-formal Education-An Approach to Education for All, Publication, New Delhi.

Mohanty, J., (1986). School Education in Emerging Society, sterling Publishers.

Mukherji, S.M., (1966). History of Education in India, Acharya Book Depot, Baroda.

Naik, J.P. & Syed, N., (1974). A Student's History of Education in India, MacMillan, New Delhi.

NCERT (1986). School Education in India – Present Status and Future Needs, New Delhi. Ozial, A.O. 'Hand Book of School Administration and Management', London, Macmillan. RadhaKumudMookerji.Ancient Indian Education (Brahmanical and Buddhist), Cosmo Publications, New Delhi – 1999.

Sainath P. (1996). Everybody loves a good drought. Penguin Books New Delhi.

World Bank, (2004).*Reaching The Child: An Integrated Approach to Child Development*. Oxford University Press, Delhi.

EPC 2: Understanding ICT and Its Application
Credit-02

Course Outcomes
After completion of this course, the pupil-teacher shall
- A. Appreciate the historical development of various educational media.
- B. Demonstrate understanding of the main components of the computer hardware in use.
- C. Apply various digital technologies for creating learning experiences for all types of learners.
- D. Use various ICTs for project based/problem based constructivist learning environment
- E. Explain the role of ICT in authentic and alternative assessment
- F. Understand the social, economic, and ethical issues associated with the use of ICT

Unit 1: Introduction to Information and Communication Technology
No. of classes- 10

- Use of Technology in Education: In Retrospect.
- Information and Communication Technology: Meaning, nature and advantages
- Hardware and Software Fundamentals
- Computer hardware fundamentals: types of computers and Computer Network (anatomy, input devices, output devices, storage devices, display devices),
- Mulitimedia Resources (Digital camera, recorder, scanner, printer, interactive white board, visualize, and multimedia projector)
- Software Fundamentals (Meaning and types)
- Office applications (Word processing, Spreadsheet Presentations, Databases, Drawing tools, Multimedia tools, File formats and conversion, utility tools)

Unit 2: ICT and Pedagogy
No. of classes- 08

- Subject specific ICT tools for creating and facilitating learning
- Subject specific online resources and their use
- Designing technology integrated learning experiences
- ICT for Pedagogical Innovations
- ➢ Project/problem based learning (PBL)
- ➢ Web Quest and virtual field trips: Concept, process, and use
- ➢ Mobile learning and related applications
- Open Educational Resources – Meaning and importance
- Approaches to integrating ICT in teaching and learning: Technological Pedagogical Content Knowledge (TPCK)
- Assistive technology for children with special needs: Tools and processes; Universal Design for Learning (UDL)

Unit 3: ICT for Assessment and Management
No. of classes- 07

- ICT and Assessment
- ➢ Electronic assessment portfolio – Concept and types; e-portfolio tools
- ➢ Creating and use of electronic rubrics for assessment
- ➢ Online and offline assessment tools – Rubrics, survey tools, puzzle makers, test generators, reflective journal, question bank

- ICT applications for CCE
- Learning analytics and feedback
- CT and Management
- ICT initiatives and standards
- ICT for personal management: e-mail, task, events, diary, networking
- ICT for educational administration: Scheduling, record keeping, student information, electronic grade book, connecting with parents and community
- Computer security: Privacy, hacking, virus, spy ware, misuse, abuse, antivirus, firewall, and safe practices.

Suggested Readings

- Ahmad, J., Ahmad, M.S. and Khan, A. (2012), *Computer Applications in Education*, Neelkamal Publication, Hyderabad,PP-288, ISBN: 978-81-8316-293-7.
- Bharihok, D. (2000). *Fundamentals of Information Technology*. Pentagon Press: New Delhi.
- CEMCA (2014). *Technology Tools for Teachers*, Commonwealth Educational Media Center for Asia, 13/14 SarvaPriyaVihar, New Delhi.
- David, M. (2009). *Project Based Learning- Using Information Technology-* Second Edition. Viva Books: New Delhi.
- James, K.L. (2003). *The Internet: A User's Guide*. Prentice Hall of India Pvt. Ltd: New Delhi.
- LaxmanMohanty, NeeharikaVora (2008). *ICT strategies for schools- a guide for school administrators*. Sage Publications: New Delhi.
- Manoj Kumar Dash (2010). *ICT in teacher development*, Neel Kamal Publications: New Delhi.
- MHRD-GOI (2004 and revised 2010) National ICT @ Schools Scheme, Department of School Education and literacy, MHRD, Govt. of India, New Delhi
- MHRD-GOI (2012) National Mission on Education through ICTs (NME-ICT), Department of Higher Education, MHRD, Govt. of India, New Delhi
- Mishra, S. (Ed.) (2009). STRIDE Hand Book 08: E-learning. IGNOU: New Delhi. Available at http://webserver.ignou.ac.in/institute/STRIDE_Hb8_webCD/ STRIDE_Hb8_ index.html
- Mohit K (2003). Design and implementation of Web-enabled Teaching Tools: IRM Press,UK.

EPC-3 Health, Yoga and Physical Education

Credit-2

Course Outcomes

After completion of this course, the pupil-teachers shall

    A. Explain the concept of holistic health, components and determinants of health from multiple perspectives

    B. Identify health problems, health status and be informed for taking remedial measures

    C. Be aware about rules of safety in hazardous situation (illness, accident and injury) and equip them with first aid measures about common sickness and injuries

    D. Critically analyse the importance of physical activities, food and nutrition on human health

    E. Differentiate between games and sports along with their importance on health

    F. Describe the adverse effects of commonly used abusive substances and drugs on health

    G. Explain the process of assessment of health and physical fitness.

    H. Evaluate the need and importance Yogic practices on physical, mental, social and emotional health of human being

    I. Identify various policies and programs related to health, physical education and yoga.

Unit-I Health Education

(Number of classes-09)

- Concept of health, importance, dimensions and determinants of health
- Health needs of children and adolescents, including differently-abled children
- Impact of Physical activities, games, sports and yoga on different body systems, Management of stress and strain and life skills.
- Food and nutrition, food habits, timing of food, nutrients and their functions, diversity of Indian food, seasonal foods and festivals, economics of food, malnutrition, including obesity,
- Dietary requirements of human body with special emphasis on the nutritional needs according to age, sex, occupation, pregnancy and also with reference to sportspersonship; Need for diet planning, Balanced diet.

Unit-II Physical Education   **(Number of classes-09)**

- Physical fitness, strength, endurance and flexibility, its components, sports skills, indigenous and self-defense activities
- Development of physical fitness; Postures; Importance of relaxation; Fitness tests; Resources and services for games and sports and Health. Common Sports Injuries and First aid.
- Games and sports — athletics (general physical fitness exercises), games (lead-up games, relays and major games) rhythmic activities, gymnastics and their impact on health
- Fundamentals skills of games and sports; Sports for recreation and competition; Rules and regulations of sports; sports ethics; sports awards and scholarships, sports-person ship.
- Drawing of Fixtures for conducting Tournament, knock-out, league, Layout of Track & Field areas.
- Commonly-abused substance and drugs and ways of prevention and inhabitation.

Unit-III Yoga

(Number of classes-07)

- Concept, need and importance of yoga, History of yoga
- Yogasanas- Standing, Sitting, Prone and Supine positions (5 Asanas each)
- Surya Namaskar and Pranayams, Meditation
- Precautionary measures for yogic practices.
- Role of yogasanas for prevention of common diseases

Transactional Strategies

- Interactive discussion, group work, sharing of experiences
- Analysing various topics by using charts, photographs, and other materials on aspects of health related issues
- Organising school health check-ups,
- Practical classes in first aids
- Project and assignments
- By organising Games and sports and demonstration of Yogic activities.

Suggested Readings

Health Education
1. K. Park, "Preventive and Social Medicine" Banarsidas Bhanoth, Publishers Nagpur Road, Jabalpur, India.
2. NCERT (2013). Training and resource materials on Adolescence Education, NCERT, New Delhi (This material is also available on www.aeparc.org.www.ncert.nic.in)
3. NCERT (2014). Population Education: Source Material, NCERT, New Delhi
4. Stephen J. Williams, Paul R. Torrens, "Introduction to Health Service, Delmore Publications

Physical Education
1. Deborah A. Wuest, Charles A. Bucher, "Foundation of Physical Education Exercise Science and Sports" Tata McGraw Hill, Pvt. Ltd., New Delhi
2. John E. Mixton, Ann E. Jewett, "An Introduction to Physical Education, W.B. Saunders Company, London
3. John Cheffers, Tom Evaul, "Introduction to Physical Education-Concept of Human Movement Prentice Hall Engle Wood" New Jersy
4. Bette J., Logdson& Others, "Physical Education for Children", Lea &Febiger, Philadelphia
5. Roberts S. Weinberg & Daniel Gould, "Foundation of Sports and Exercise Psychology", Human Kinetics Publication
6. A.K. Uppal, Lawrance Gray Kumar, "Biomechanics in Physical Education and Exercise Science" Friends Publication, New Delhi
7. Jack H. Wilmore, David L. Costill, W. Larry Kenney, "Physiology of Sports and Exercise" Human Kinetics Publication

Yoga
1. Swami SatyanandSaraswati, "Asana Pranayama Mudra Bandh", Bihar School of Yoga, Munger

2. M.M. Ghore, "Anotomy and Physiology of Yogic Practices" Lonavala Yoga Institute, Lonavala
3. Gharote M.L. (2004). Applied Yoga, Kaivalyadhama S.M.Y.M. Samiti, Lonvala
4. "Yogasana" Morarji Desai National Institute of Yoga, New Delhi
5. "Pranayama" Morarji Desai National Institute of Yoga, New Delhi
6. MDNIY (2010). "Yoga Teachers Manual for School Teachers, New Delhi
7. NCERT (2015). Yoga: A Healthy Way of Living Upper Primary Stage, New Delhi
8. NCERT (2015). Yoga: A Healthy Way of Living Secondary Stage, New Delhi

EF-3: Working with Community

Credit-02

Course Outcome

After completion of this course, the pupil- teacher shall

    A. Explain the factors working within the society, community i.e. knowledge of social realities

    B. Develop the dignity of labour among student – teachers

    C. Create awareness on social and economic reconstruction of the country.

    D. Point out the educational problems and needs of the society.

    E. Prepare youth for sustainable development.

    F. Develop personality through community service.

    Student teachers shall be provided exposure to community life for at least one week during which they shall live with the community members and act in terms of preparing school development plan, sharing cultural practices, holding cultural programmes and gaining community's perception about and aspirations from formal education system. The members of SMC/VMC should be associated in these activities.

The institution will form a committee, including faculty members, student teachers and community/SMC members for the smooth organization of this programme. The student teachers shall prepare a detailed report of the programme, individually and/or in group during the activity and submit at the end of the programme.

Transaction Mode

Discussion, Rally, Competitions (Debates) Posters and Banner displays Working in community setting, Mass movement, *Nukkad* Performances, Local action group formation, surveys, interviews, action research, case study, dissemination of success stories etc**.**

Suggested Activities

➢ ☐micro planning of a school community relationship

➢ study of the nature of community participation in a secondary school

➢ survey of community resources for participation in scholastic and co-scholastic activities of a school educational survey of a slum area report on social customs, traditions and superstition

➢ survey of a village/town with at least 20 households in order to study the socio-economic and educational status of the villager

➢ study of wastage and stagnation in local primary schools

➢ study of an area in regard to consumption of electricity and water and suggest remedial measures

➢ tree plantation programme in the campus/nearby village

➢ survey of parent's attitude towards education of their children

➢ organization of non-formal education centers for dropouts and out of school children in a locality

➢ organization of campus beautification programme

➢ identification of problems of parents with respect to education of their children

➢ AIDS awareness, electoral awareness, road safety, human rights, women rights etc literacy programmes in the community

➢ cleanliness drives in the community and awareness about its needs

➢ developing healthy food habits among the community members

➢ training of community in some simple vocations for self-employment

- ➢ action research on local problems in consultation with the community
- ➢ micro – planning exercises for assessing the educational status of the community
- ➢ establishment of Peace-committees and making them functional effectively
- ➢ critical review of implementation of RTE Act(2009) .
- ➢ assistance and working with local community in actual relief work whenever needed
- ➢ training of community in First Aid
- ➢ exploiting the community resources and finding means and ways of using them for school

Many more such exercises could be conceived. Any such activities could be planned at the institutional level and executed. It is suggested that these activities may be conducted individually or collectively under the supervision of teacher educators.
The performance of student teachers in all activities will be graded in a five point scale and at the end of the programme overall grade will be awarded.

A-Excellent, B-Very Good, C-Good, D-Average, E-Poor