3-YEAR INTEGRATED B.Ed.-M.Ed. PROGRAMME, 2016-2019

Courses of Study

School of Education
Maharaja Sriram Chandra Bhanja Deo University
(Erstwhile North Orissa University)
Sriram Chandra Vihar, Takatpur, Baripada
Mayurbhanj, Odisha

(For All Universities/Institutions of Odisha: As per the NCTE Norms and Standards, 2014 and NCTE Curriculum Framework)

Developed by

Directorate of Teacher Education & State Council of Educational Research and Training,
Odisha, Bhubaneswar.
2016-2017

COURSES OF STUDY FOR 3-YEAR INTEGRATED B.Ed.-M.Ed. PROGRAMME, 2016-2019

(For All Universities/Institutions of Odisha: As per the NCTE Norms and Standards, 2014 and NCTE Curriculum Framework)

Context

The Integrated B.Ed.-M.Ed. Programme is a three-year full-time professional programme in education, without any option of intermediate exit before completing the 3-years study. It aims at preparing teacher educators and other professionals in education, including curriculum developers, educational policy analysts, educational planners and administrators, school principals, supervisors and researchers in the field of education. The completion of the programme shall lead to integrated B.Ed.-M.Ed. degree with specialization in school education (both elementary and secondary).

The integrated programme thus subsumes all curricular elements of B.Ed. and M.Ed. The graduate of an integrated B.Ed.-M.Ed. programme should be equivalent in his/her knowledge and competence, to a graduate of a 2-year M.Ed. programme. Further he/she should have developed the professional competence and skills of a school teacher that a 2-year B.Ed. programme or a 4-year integrated teacher preparation programme should have developed.

While developing the detailed design of this syllabus, the recommendations as advanced in the following documents have been taken into consideration:

- National Curriculum Framework - 2005
- National Curriculum Framework for Teacher Education 2009
- NCTE's Norms and Standards for the 3-year Integrated B.Ed.-M.Ed. Programme, 2014
- Report of the NCTE Sub-Committee for Three Year Integrated B.Ed.-M.Ed. Programme, 2014
- NCTE's Curriculum Framework : Two Year M.Ed. Programme, 2014
- The Right of Children to Free and Compulsory Education Act 2009
- Framework for implementation of Rashtriya Madhyamik Shiksha Abhiyan: A scheme for Universalization of access to and improvement of quality at the secondary stage, 2008
- Sarva Shiksha Abhiyan: Framework for implementation based on the Right of Children to Free and Compulsory Education Act, 2009 (2011).

The following principles have guided the development of this course :

- Reducing the gap between theory and practice,
- Eliminating mismatch between post-graduate teacher education curriculum and teacher education institution realities,
- Inclusion of all relevant curricular components of 2-year B.Ed. and 2-year M.Ed. programmes

- Updating of curricular areas of teacher education in terms of enrichment of content knowledge and pedagogical competence of prospective teacher educators,
- Using variety of approaches and methods for transaction of the course contents,
- Incorporating multi-modal strategies for effective, continuous and comprehensive assessment of the performance of the prospective teacher educators.

Course Objectives:

The 3-year Integrated B.Ed.-M.Ed. Course is a professional programme in the field of Teacher Education which aims at preparing Teacher Educators and other professionals including curriculum developers, educational policy analysts, planners, administrators, supervisors, school Principals and researchers. The completion of the programme shall lead to B.Ed.- M.Ed. Degree with specialization in selected areas focusing on both elementary and secondary education.

The programme is designed to provide opportunities for the perspective Teacher Educators to extend and deepen their horizontal of knowledge and understanding of education and teacher education, develop research capacities, specialized in select areas etc. The course includes both critical comprehension of theory as well as hands-on and field based reflective practices, skills and competences.

The Syllabus for Three-year B.Ed.-M.Ed. programme is designed to attain the following broad objectives. After the completion of the course the prospective teacher educators shall:

- Understand the central concepts, tools of inquiry, and structures of the disciplines and can create learning experiences that make these aspects of subject matter meaningful.
- Understand how children learn and develop how they differ in their approaches to learning and create learning opportunities that are adapted to diverse learners and learning contexts.
- Plan learning experiences that are based on learner's existing proficiency, interests, experiences including misconceptions and errors and understand how students come to view, develop and make sense of subject matter contained in the learning experiences.
- Use knowledge of effective verbal, nonverbal and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.
- Understand and use formal and informal assessment strategies to evaluate and ensure the continuous intellectual, social and physical development of the learner.
- Develop sensibilities to identify problems for further probing and abilities to conduct pure, applied and/or action research on the identified issues concerning educational theory and practices.
- Develop self-identity as a teacher educator through continuous experiences and reflective practices that continually evaluate the effects of his/her choices and actions.

Modes of Transaction:

With a view to move away from theoretical discourses and lectures, the student-teacher is required to be engaged in various kinds of learning experience. This programme intends to provide him/her with the specific engagements that are spelt out under each course. However, the nature of engagement of the perspective Teacher-Educator will be of the following kinds:

- **Lecture-cum-Discussion Session:** The teacher educator provides the perspective Teacher-Educator a platform to review their experiences, helps them to develop insights into the disciplinary knowledge base and to relate them to the school realities.
- **Focused Reading and Reflection:** Perspective Teacher-Educator would be led to focus readings on various themes with questions inviting reflections either individually or in small groups.
- **Observation-Documentation-Analysis:** Simulated and real school/ community experiences would be arranged for the student teachers to observe, document in the form of record/ journal/ diary and analyze with an intention to revisit their own understandings or develop new insights.
- **Seminar Presentations:** Students will undertake thematic/topical study, prepare write-up and make seminar presentation followed by open-house discussion with a view to enhance their knowledge base and repertoire of skills in presentation.
- **Attachment to Teacher Education Institution:** Learning experiences would be provided through several teacher education institution-based practicum for development of certain professional qualities and competencies. This would include opportunities for planning and implementation of learning experiences and strategies, and reflecting on their appropriateness and effectiveness.
- **Workshop :** A series of learning experiences in a given performance area would be provided to perspective Teacher-Educator in the form of workshop, engaging them in modeling-practice-feedback sequence with a view to developing specified competencies required for a teacher.
- **Panel Discussion :** A series of panel discussions shall be planned on different themes/issues relating to school education and teacher education and shall be organized in the respective TEIs / University Department in which the prospective teacher educators shall participate and each of them shall prepare a brief report on the conclusion of each panel discussion session.
- **Group Work:** On different dimensions of an issue/theme relating to curricular components or concerning any emerging issues of school education and teacher education, groups shall be formed among the prospective teacher educators who would work on the theme and performance of each individual group shall be reported.
- **Library Work:** On specific theme/issue/problems relating to school education and teacher education or on any other curricular issues, the prospective teacher educators would be asked to consult library, collect information and prepare their individual write-ups for seminar presentation and discussion.
- **Projects:** Course related projects having contemporary concern shall be assigned to individual prospective teacher educator to be completed within a specified period of time with a report.

- **Collaborative Presentations:** The prospective teacher educators in groups along with their allotted mentors shall work collaboratively on a theme and prepare the report for seminar presentation.
- **School Visit and Sharing of Experiences:** As per the requirements of the School Internship programme included in the curriculum, school visits, interaction with students, teachers and other stakeholders and sharing the experiences with them and with peers shall be one of the core activities of the prospective teacher educators. Similar visits to other teacher education institutions, both ETEIs and STEIs, and interaction with student teachers, teacher educators and other stakeholders shall be conducted and the experiences shall be shared.
- **Sessional Work :** Each course paper in this programme has theoretical as well as practical component in the form of assignment which need to be conducted as assessed internally in time.

The topics for the sessional work listed under each course are suggestive. The concerned teacher educator may assign any other topic/issue relevant to the respective course.

Working Days: There shall be at least 215 working days in each year exclusive of the period of admission and inclusive of classroom transaction, practicum, field study and conduct of examination. The institution shall work for a minimum of 36 hours in a week (5 or 6 days). The total duration of the programme will be roughly equivalent to 107 weeks of six days each totaling up to 640 days.

Attendance: Minimum attendance shall be **80%** for Theory Courses and Practicum and **90%** for Field Attachment.

COURSE OUTLINE OF 3-YEAR INTEGRATED B.ED.-M.ED. PROGRAMME, 2016-19

Major Course Area	Course		Credit	Marks		
				Internal	External	Total
A. Common Core (78)						
A.1 Perspective Courses (PC)(36)						
Philosophy of Education	**PC-1**	Introduction to Study of Education	**4**	**30**	**70**	**100**
	PC-2	Philosophical Perspectives in Education	**4**	**30**	**70**	**100**
Sociology-History-Political Economy of Education	**PC-3**	Education, School and Society	**4**	**30**	**70**	**100**
	PC-4	Historical, Political and Economic Perspectives of Education	**4**	**30**	**70**	**100**
Psychology of Education	**PC-5**	Childhood and Growing up	**4**	**30**	**70**	**100**
	PC-6	Learner and Learning	**4**	**30**	**70**	**100**
Contemporary Concerns of Education	**PC-7**	Contemporary Concerns in Education	**4**	**30**	**70**	**100**
Curriculum Studies	**PC-8**	Curriculum Studies	**4**	**30**	**70**	**100**
Language across	**PC-9**	Language Across Curriculum	**2**	**15**	**35**	**50**

Curriculum					
Learning Assessment	**PC-10** Learning Assessment	**2**	**15**	**35**	**50**
A.2 Research, Tools and Self Development (26) (RTS)					
Theory (14)					
Research Methods	**RTS-1** Introduction to Research Methods	**4**	**30**	**70**	**100**
	RTS-2 Advanced Research Methods	**4**	**30**	**70**	**100**
Inclusive Schooling	**RTS-3** Inclusive Schooling	**2**	**15**	**35**	**50**
ICT in Education	**RTS-4** ICT in Education	**2**	**50**		**50**
Self Development	**RTS-5** Self Development	**2**	**50**		**50**
Practicum (12)					
Research Project leading to Dissertation	**RTS Pr.-1** Dissertation Work	**8**	**150**	**50**	**200**
Student Research Seminar	**RTS Pr.-2** Research Seminars	**2**	**50**	**---**	**50**
Academic/ Professional Writing	**RTS Pr.-3** Communication and Expository Writing	**2**	**50**	**---**	**50**
A.3. Teacher Education Courses (TEC) (12)					
Theory(8)					
Teacher Education	**TEC-1** Perspectives in Teacher Education	**4**	**30**	**70**	**100**
	TEC-2 Issues and Research in Teacher Education	**4**	**30**	**70**	**100**
Practicum (4)					
Attachment with / Internship in TEI	**TEC Pr.** Attachment with Elementary and Secondary TEIs	**4**	**100**		**100**
A.4. School related Field Experience (SFE) (Practicum-4)					
School Experience (Observation of Schools)	**PSS Pr.-I:** **SI-I** School Internship-I **(**School Exposure)	**4**	**100**		**100**
B. Stage Specific Courses					
B.1 Core Courses (46)					
B.1.1 Stage Specific Concerns in School Education (SSC) (12)					
School Education : Systems, Structures and Functions	**SSC-1** School Education: Systems, Structures and Functions	**4**	**30**	**70**	**100**
Emerging Issues in School Education	**SSC-2** Emerging Issues in Elementary Education	**4**	**30**	**70**	**100**
	SSC-3 Emerging Issues in Secondary and Senior Secondary Education	**4**	**30**	**70**	**100**
B.1.2 Pedagogy of School Subjects (PPP + One subject from Gr. A and one from Gr. B) (20)**					
	PPP Pedagogy Processes and Practices	**4**	**30**	**70**	**100**
Pedagogy of School Subjects Gr. A :	**PSS-A:** Paper-1	**4**	**30**	**70**	**100**
	PSS-A: Paper-2	**4**	**30**	**70**	**100**

Odia, English. Mathematics and Bio-Science (Any **one**)					
Pedagogy of School Subjects-B: Social Science and Physical Science (Any **one**)	**PSS-B:** Paper-1	**4**	**30**	**70**	**100**
	PSS-B: Paper-2	**4**	**30**	**70**	**100**
B.1.3 School-related Field Experiences in Elementary/Secondary & Senior Secondary Levels PSS-Practicum (14)					
On-site Content - Pedagogy Related Observations and Activities	**PSS Pr.-II:** **SI-II** School Internship-II (Exposure to Multi-cultural Contexts in Schools)	**4**	**100**		**100**
Practice Teaching and related activities	**PSS Pr.-III:** **SI-III** School Internship-III (Classroom Transaction and Related Activities)	**8**	**200**		**200**
Community Engagement	**PSS Pr.-IV:** Interaction with Community on their Involvement in School Activities	**1**	**25**		**25**
Exposure to Non-school agencies having pertinent linkages with schools	**PSS Pr.-V:** Discourse with other related agencies/ Institutions on their roles in school education	**1**	**25**		**25**
B.2 Theme-based Specialization (20)					
Theory (16)					
Theme Areas (*Any TWO*)	**TS-1** Educational Management and Leadership (P.1 & P.2)	**4+4**	**30+30**	**70+70**	**100 +100**
	TS-2 Education Policy and Planning (P.1 & P.2)	**4+4**	**30+30**	**70+70**	**100 +100**
	TS-3 ICT in Education (P.1 & P.2)	**4+4**	**30+30**	**70+70**	**100 +100**
	TS-4 Environment Education (P.1 & P.2)	**4+4**	**30+30**	**70+70**	**100 +100**
	TS-5 Guidance and Counselling (P.1 & P.2)	**4+4**	**30+30**	**70+70**	**100 +100**
	TS-6 Pre-School Education (P.1 & P.2)	**4+4**	**30+30**	**70+70**	**100 +100**
	Theme Area Practicum (4)	**4**	**100**		**100**
TOTAL					**3,600**

***** PSS Combinations:***

Science student teacher educators: Math & Physical Science; Bio. Science & Phy. Science.
Arts student teacher educators: Eng.& Social Sc.; Odia & Social Sc.; Math & Social Sc.

N.B. *All the course components under 'School Internship and Field Attachment' have to be completed within 30 weeks.*

SEMESTER-WISE COURSES AND CREDITS

SEMESTER-I (20+4 CREDITS)

Course	Title	Credit (s)		Marks		
		Theory (Teaching Hrs.)	Practicum (hours/ weeks)	Internal Assessment	External Exam.	Full Marks
PC-3	Education, School and Society	4 (64 Hrs.)	1 (32)	**30**	**70**	**100**
PC-5	Childhood and Growing up	4 (64 Hrs.)	1 (32)	**30**	**70**	**100**
PC-8	Curriculum Studies	4 (64 Hrs.)	1 (32)	**30**	**70**	**100**
PPP	Pedagogy Processes and Practices	4 (64 Hrs.)	1 (32)	**30**	**70**	**100**
PSS-A P.1	Pedagogy of School Subject **Gr. A P.1**	4 (64 Hrs.)	1 (32)	**30**	**70**	**100**
PSS Pr.-I	SI-I School Exposure	-	04 (2 weeks)	**100**	**-**	**100**
Total		**20 (320 Hrs.)**	**04 (160 Hrs. & 2 weeks)**	**150+ 100**	**350**	**500+ 100**

SEMESTER-II (18+6 CREDITS)

Course	Title	Credit (s)		Marks		
		Theory (Teaching Hrs.)	Practicum (weeks)	Internal Assessment	External Exam.	Full Marks
PC-4	Historical, Political and Economic Perspectives of Education	4 (64 Hrs.)	-	**30**	**70**	**100**
PC-6	Learner and Learning	4 (64 Hrs.)	-	**30**	**70**	**100**
PC-10	Learning Assessment	2 (32 Hrs.)	-	**15**	**35**	**50**
RTS-3	Inclusive Schooling	2 (32 Hrs.)	-	**15**	**35**	**50**
RTS-4	ICT in Education	2 (32 Hrs.)	-	**15**	**35**	**50**
PSS-A P.2	Pedagogy of School Subjects **Gr. A P.2**	4 (64 Hrs.)	-	**30**	**70**	**100**
RTS Pr.-3	Communication and Expository Writing	-	02 (64 Hrs.)	**50**	**-**	**50**
PSS Pr.-II	SI-II Exposure to Multi-cultural Contexts in Schools	-	04 (4 weeks)	**100**	**-**	**100**
Total		**18 (320 Hrs.)**	**06**	**135+ 150**	**315**	**450+ 150**

SEMESTER-III (14+10 CREDITS)

Course	Title	Credit (s)		Marks		
		Theory (Teaching Hrs.)	Practicum (Hrs./weeks)	Internal Assessment	External Exam.	Full Marks
PC-1	Introduction to Study of Education	4 (64 Hrs.)	-	**30**	**70**	**100**
PC-9	Language Across Curriculum	2 (32 Hrs.)	-	**15**	**35**	**50**
RTS-1	Introduction to Research Methods	4 (64 Hrs.)	-	**30**	**70**	**100**
PSS-B P.1	Pedagogy of School Subjects **Gr.B P.1**	4 (64 Hrs.)	-	**30**	**70**	**100**
RTS Pr.-1	Dissertation (Part I)	-	2 (64 Hrs.)	**50**	**-**	**50**
RTS Pr.-2	Research Seminar	-	2 (64 Hrs.)	**50**	**-**	**50**
PSS Pr.-III	SI-III Classroom Transaction and related activity	-	4 (6 weeks)	**100**	**-**	**100**
PSS Pr.-IV	Interaction with Community	-	1 (1 week)	**25**	**-**	**25**
PSS Pr.-V	Discourse with Other Related Agencies	-	1 (1 week)	**25**	**-**	**25**
Total		**14 (224 Hrs.)**	**10**	**105+ 250**	**245**	**350+ 250**

SEMESTER-IV (18 +6 CREDITS)

Course	Title	Credit (s)		Marks		
		Theory (Teaching Hrs.)	Practicum (weeks)	Internal Assessment	External Exam.	Full Marks
PC-2	Philosophical Perspectives of Education	4 (64 Hrs.)	-	**30**	**70**	**100**
RTS-5	Self Development	2 (32 Hrs.)	-	**15**	**35**	**50**
TEC-1	Perspectives in Teacher Education	4 (64 Hrs.)	-	**30**	**70**	**100**
PSS-B P.2	Pedagogy of School Subjects **Gr.B P.2**	4 (64 Hrs.)	-	**30**	**70**	**100**
SSC-1	School Education: Systems, Structures and Functions	4 (64 Hrs.)	-	**30**	**70**	**100**
RTS Pr.-1	Dissertation (Part II)	-	2 (64 Hrs.)	**50**	**-**	**50**
TEC Pr.	Attachment with Elementary and Secondary TEIs	**-**	4 (6 weeks)	**100**	**-**	**100**
Total		**18 (288 Hrs.)**	**6**	**135+ 150**	**315**	**450+ 150**

SEMESTER-V (16+8 CREDITS)

Course	Title	Credit (s)		Marks		
		Theory (Teaching Hrs.)	Practicum (Hrs,/weeks)	Internal Assessment	External Exam.	Full Marks
PC-7	Contemporary Concerns in Education	4 (64 Hrs.)	-	**30**	**70**	**100**
RTS-2	Advanced Research Methods	4 (64 Hrs.)	-	**30**	**70**	**100**
TS	Theme-based Specialization (a. P.1)	4 (64 Hrs.)	-	**30**	**70**	**100**
	Theme-based Specialization (b. P.1)	4 (64 Hrs.)	-	**30**	**70**	**100**
RTS Pr.-1	Dissertation (Part III)	-	2 (64 Hrs.)	**50**	**-**	**50**
PSS Pr.-III	SI-III Classroom Transaction and related activity (Contd.)	-	4 (6 weeks)	**100**	**-**	**100**
TS Pr.-1	Theme Area Practicum	-	2 (2 weeks)	**50**	**-**	**50**
Total		**16 (256 Hrs.)**	**8**	**120+ 200**	**280**	**400+ 200**

SEMESTER-VI (20+4 CREDITS)

Course	Title	Credit (s)		Marks		
		Theory (Teaching Hrs.)	Practicum (Hrs,/ weeks)	Internal Assessment	External Exam.	Full Marks
TEC-2	Issues and Research in Teacher Education	4 (64 Hrs.)	-	**30**	**70**	**100**
SSC-2	Emerging Issues in Elementary Education	4 (64 Hrs.)	-	**30**	**70**	**100**
SSC-3	Emerging Issues in Secondary and Senior Secondary Education	4 (64 Hrs.)	-	**30**	**70**	**100**
TS	Theme-based Specialization (a. P.2)	4 (64 Hrs.)	-	**30**	**70**	**100**
	Theme-based Specialization (b. P.2)	4 (64 Hrs.)	-	**30**	**70**	**100**
RTS Pr.-1	Dissertation (Part IV)	-	4 (64 Hrs.)	**-**	**50**	**50**
TS Pr.-2	Theme Area Practicum	-	2 (2 weeks)	**50**	**-**	**50**
Total		**20 (320 Hrs.)**	**4**	**150+ 50**	**350+ 50**	**500+ 100**

Assessment Criteria

The performance of the prospective teacher-educators in the course under the perspective courses, research tool courses, teacher education courses, specialization courses, internship and spreading over six semesters as detailed below.

Common Core Courses

- The performance of each prospective teacher-educator in each core course shall be assessed internally out of 30 marks and externally out of 70 marks.

- Sessional work in respect of each prospective teacher-educator shall be assessed internally out of 30 marks by the faculty member concerned both on the process and final product (report) and shall be awarded marks accordingly. The detailed criteria of assessment of the sessional work shall be spelt out by a committee of faculty members chosen by the head of the institution.

Specialization Courses

The performance of each prospective teacher-educator in the specialization course, opted by him / her shall be assessed both internally and externally out of 30 marks and 70 marks respectively in the manner as indicated above for the core courses.

Internship and Field Attachment

The performance of each prospective teacher-educator in this course shall be assessed internally by the faculty members (Mentors) under whom he / she is assigned the work.

Research Leading to Dissertation

The performance of each prospective teacher-educator in research-based activities in Semester III and IV shall be assessed internally out of 10 marks each. Such activities IV in second semester shall be assessed both internally out of 20 marks and externally out of 50 marks. The internal assessment of the research-based activities I, II and III in both the semesters shall be made through seminar presentations by the student-teachers. A panel of faculty/ experts shall assess their performance in the semester and award a consensus mark out of 10 to each student-teacher.

The internal assessment for RBA-IV (Final Report of the Dissertation) shall be made in the seminar presentation by a group of experts/ faculty and a consensus marks shall be awarded to the student-teacher out of 20. At this stage if any improvement in the dissertation is suggested by the expert group that can be incorporated before the final submission of the same for external assessment. The final dissertation shall be assessed externally through viva-voce in which a consensus mark out of 50 is given by the both internal and external examiners to the student-teacher concerned.

Practicum

The performance of each student-teacher in the Practicum I, II and III in the first semester shall be assessed internally out of 10 each. The faculty members concerned shall award marks to each student-teacher during his/her performance in demonstration, observation and teaching classes. The performance of each student teacher in Practicum-IV i.e. final teaching shall be assessed by the internal and external examiners both out of 50 and a consensus mark shall be awarded to each student-teacher on his/her performance. The assessment of records and other related materials of teaching practice shall be assessed internally out of 20 in respect of each student-teacher by the faculty members concerned.

Both internal and external marks shall be reflected in the final mark sheet of each student-teacher.

EXAMINATION AND CERTIFICATION

1. The respective Universities shall conduct the semester-end examination for 3-year Integrated B.Ed.-M.Ed. course in every semester. The time of examination shall be decided by the Examination Committee of the Universities concerned.

2. The examination shall be conducted by means of Written Test (for Theory Papers) and test of Practical (for Practical Papers) and shall be in accordance with such instruction as may be decided and issued by the Universities concerned.

3. The examinations shall be opened to the candidates who have been duly selected as per the approved admission guidelines of the Institutions/Universities and admitted into the course.

4. The candidates who have prosecuted their Courses of Study by attending both theory and practical classes thereby securing not less than 80% attendance in each paper (70% on production of Medical Certificate) and have successfully completed the required number of practical assignments (Sessional work, Practice Teaching, Research-based activities) duly assessed internally and fulfilling all other required conditions in order to be declared eligible for the semester-end examination by the Head of Departments/ Institutions concerned.

5. If the candidates who are sent up for admission to the examination by satisfying all the conditions as laid down in the Sl. No.4 Supra but could not appear or having appeared have failed at the examination, shall be allowed to appear in three consecutive as ex-regular candidates.

6. The medium of instruction and examination in all the courses shall be English in PSS (Odia).

7. Minimum percentage of pass mark in each theory paper shall be 50 and in each practical paper 60 of the total marks of that paper both internal and external assessment.

8. Each candidate has to secure minimum pass mark in each course (Theory and Practical) in sessional work and semester-end examination separately. If a candidate fails to secure the minimum pass mark in sessional work he/ she cannot be eligible to fill up the form to sit in the semester-end final examination.

9. A candidate failing to secure 50% marks in any theory course (s) and 60%marks in any practical course(s) in the semester and examination(s), shall be allowed to appear in the examination in that course(s) as back paper(s) and be given three consecutive chances to pass in the concerned course(s). The internal marks secured by the candidate in that course(s) shall be retained as such.

10. If a candidate discontinues the course in the middle at any stage without completing the study of the full course and fulfilling the stipulated requirements thereof, he/she shall not be allowed to appear at the semester-end university examination(s). In such circumstances, he/she may apply afresh to the concerned institutions/university departments for his/her selection and admission to the course if he/she so desires.

11. No candidate shall be allowed to have interim exit from the course since it is and integrated course leading to B.Ed.-M.Ed.

12. At the final qualifying examination, award of Division shall be considered out of 3600 marks (600 in each semester for six semesters). In award of class, marks obtained by a

candidate, both in theory and practical papers, in all the six semesters (internal and external assessment) shall be taken into consideration. Class shall be awarded as per the following:

First Class : 2160 marks and above (60% and above)
Second Class : 1800 to 2159 marks (50% and above but below 60%)

13. All other conditions for conduct of examination and declaration of result shall be determined by the concerned University as per their regulations and statute.

FIRST SEMESTER

PC-3: Education, School and Society

Semester-I	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours-64

Objectives:

On completion of this course, the prospective teacher educator shall:

- *State the narrow and broad meaning of education and form own concept on education.*
- *Identify various modes and processes of education.*
- *Explain the foundations of education and the aims of education as recommended by different commissions education policies and educational thinkers .*
- *State the relationship between school and education, school and community and among education society and culture.*
- *Elaborate the linkage between education and national development.*

Detailed Course Content:

Unit 1: Understanding Education

- Meaning - derivational, narrow and broad, Eastern and Western viewpoints; Process - Bi-polar, tri-polar, multi-polar, Life-long process; Mode - formal/institutional, Informal/Incidental, Non-formal; Aims: Individual and social; Aims of education according to Secondary Education Commission (1952-1953), Education Commission (1964-1966).
- Education as a discipline: Attributes of a discipline, Importance of Education as a discipline; Interdisciplinary nature of education- Its relationship with philosophy, psychology, sociology, economics, science, anthropology, technology, management etc.
- Education as a system: Its components and their interrelationships; Education as a sub-system- its relationship with other sub-systems.
- Foundations of Education: Philosophical, psychological and sociological - their implications for education.

Unit 2: Education and School

- School as a formal agency of Education: Attributes - Purpose (Socio-cultural), Location, Time, Clientele/Stakeholders (primary and secondary stakeholders) and Programmes.
- School Activities & Resources: Activities – Curricular, co-curricular & other curricular/Scholastic & co-scholastic- Their organization; Resources Knowledge, Human, Physical (Material, Infrastructural, ICT) and Financial- Their sources and utilization.
- School Environment: Learner and Learning-friendly- Characteristics and components; strategies for ensuring learning-friendly environment.
- School-Community Interface: Importance, Aspects of interface, strategies for strengthening their inter-relationships, and their roles in building learning communities.

Unit 3: Education and Society

- Society as a system: Society - Meaning and goals; Social system & its subsystems - Concept, nature and components; Relationship between education and society.
- Education for socialization: Socialization - Meaning, aspects, and role of education.
- Social change and social control: Social change- Meaning, dimensions, types and factors; Social control - Meaning and modes; Role of education effecting social change and control; Social change and control influencing education.
- Education and Modernization: Meaning of modernization; Characteristics of a modernized society; Adaptive demands of modernization and role of education.

Unit 4: Education and Inclusive Development

- Education and Development: Indicators of development; Education promoting development- Human Resource and Socio-economic; Development facilitating quality of education.
- Inclusive development: Meaning, Dimensions (social, educational, economic, cultural, technological, etc); Education for sustainable and inclusive development with reference to Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs).
- Support system for Education and Development: Major support providers – National and International bodies/agencies- MHRD, UGC, NCERT, NUEPA; State Department of Education and other expert bodies; UNESCO, UNICEF, World Bank, DFID – Their roles.
- Other support agencies: Civil Society groups, Teacher and Student Organizations, NGOs, Mass Media, Family and Community; Types of support provided by each agency; Strategies for establishing functional linkage among the service providers.

Sessional Work:

Each prospective teacher educator is required to submit ***any two*** assignments from the following:

- Preparation of a paper on the aims of education as recommended by the commissions, education policies and educational thinkers for comparative analysis.
- Survey of a community and working our strategies for mobilization of resources available in the community for improvement of school practices.
- Preparation of a paper on how school has been responsible for modernization of the community within which the school is situated.
- Preparation of a blueprint on the different areas of possible school community interface.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

Clarke, P. (2001). *Teaching and learning: The Culture of pedagogy*. New Delhi: Sage Publication.

Dewey, John (1916/1977). *Democracy and education*. New York: MacMillan.

Dewey, John (1956). *The Child and the curriculum, school and society*. Chicago, Illinois: University of Chicago Press.

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

Govt. of India (1986/'92). *National policy on education*. New Delhi: MHRD.

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

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

Ministry of Education (1966). *Education and national development*. New Delhi: Ministry of Education, Government of India.

Ministry of Human Resource Development (2004).*Learning without Burden: Report of the National Advisory Committee.* New Delhi: Min. of HRD.

Mukherji, S.M., (1966). *History of education in India*. Vadodara: Acharya Book Depot.

Naik, J.P. and Syed, N., (1974). *A student's history of education in India*. New Delhi: MacMillan.

NCERT (2005). *National curriculum framework 2005*. New Delhi: National Council of Educational Research and Training.

Ornstein, Allan C. & Levine, Daniel U. (1989).*Foundations of education* (4th Edn.). Boston: Houghton Mifflin Co.

Pathak, Avijit (2002). *Social implications of schooling*. New Delhi: Rainbow Publishers.

Peters, R.S. (1967). *The concept of education*. London: Routledge Kegan & Paul.

Salamatullah, (1979). *Education in social context*. New Delhi: NCERT.

Saraswati, T.S. (Ed.) (1999). *Culture, socialization and human development: Theory, research and applications in India*. New Delhi: Sage Publication.

Srinivas, M.N., (1986). *Social changes in modern India*. Bombay: Allied Publishers.

PC-5: Childhood and Growing Up

Semester-I	**Credit-4**
Marks 100 (Ext. 70+ Int.30)	**Contact Hours-64**

Objectives:

On completion of this course, the prospective teacher educator shall

- *Explain the concepts of growth and development of human child and the underlined general principles of growth and development.*
- *Describe briefly the periods and the typical characteristics of growth and development during each period.*
- *Specify the contexts and factors influencing development.*
- *Explain the theories of socio-emotional, cognitive and language development and their educational implications.*
- *Describe the developmental characteristics of childhood development and their bearing on school and classroom practices.*
- *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.*
- *State the different forms and characteristics of individual differences and the ways of meeting the classroom issues arising out of the differences.*
- *Identify the learning needs during the different stages of development and adopt appropriate strategies in and out of school to meet the learning needs.*

Detailed Course Content:

Unit 1: Understanding the Development Process

- Growth and development - Concept and General Principles of Development; Stages of development - concept (sequential, structural identity, critical periods, processes-reversible and irreversible), different stages of human growth and development- infancy, childhood, adolescence, adulthood and old age;
- Contexts of development: Socio-economic, cross-cultural-psychological, and anthropological;
- Factors influencing development: Heredity, environment, nutrition, child-rearing practices, socio economic status, siblings and peers.

Unit 2: Theories of Child and Adolescent Development

- Socio-Emotional Development: Erickson's theory of psycho-social development; Theory of development of social play- Jean Piaget;
- Cognitive and Language Development: Cognitive developmental stages of Piaget; Conceptual and Language development theories of Vygotsky; Language development theory of Noam Chomsky; Brief theoretical framework and its educational implications;
- Developmental characteristics during childhood: Physical, social, cognitive and emotional; Role of school and teachers.

Unit 3: Developmental Characteristics and Needs during Adolescence

- Growth and development during adolescence: Characteristics during early and late adolescence - Physical, Social, Cognitive and Language, Emotional and Moral; Challenges of adolescence;
- Context-specific developmental tasks based on specific needs and problems during adolescence; Problems of adjustment;
- Role of school and teacher in addressing the challenges of developmental needs of adolescents in various contexts.

Unit 4: Understanding Individual Differences among Learners

- Individual differences due to cognitive, social and emotional attributes; Individual differences in learning in terms of mental ability, rate of learning , motivation to learn, learning style, attitude etc.; recognizing the uniqueness of the learner;
- Learners with different mental abilities: intelligence, emotional intelligence and creativity- their concept, nature and assessment; categorization of learners based on mental abilities;
- Managing individual differences in learning - learning needs of different types of learners (gifted and backward learners; fast and slow learners).

Sessional Work:

Each prospective teacher educator is required to submit ***any two*** assignments from the following:

- Case Study of a problem child / a slow learner/ a disadvantaged child.
- Rating of student-teachers' classroom performance. (of any 5 student-teachers' performance)
- Analysis of the common behavioural problems observed in the classroom suggesting the ways to address them.
- Preparation of five activities for promoting creativity among the school students.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

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

Berk, Laura E. (2011). *Child development* (9th Edn.). New Delhi: Prentice Hall of India.

Dash, M. and Dash, N.(2006). *Fundamentals of educational psychology*. New Delhi: Atlantic.

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

Hurlock, E. B. (1980). *Developmental psychology: All span approach*. New York: McGraw Hill Book.

Hurlock, E.B. (1980). *Child development* (6th Edn.). Tokyo: McGraw-Hill, Kogakusha Ltd.

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

Kail, Robert V (2011). *Children and their development* (6th Edition). Englewood Cliffs, N.J: Prentice Hall.

PC-8: Curriculum Studies

Semester-I	**Credit-4**
Marks 100 (Ext. 70+ Int.30)	**Contact Hours-64**

Objectives:

On completion of the course the prospective teacher educator shall:

- *Understand the bases and components of curriculum and the theories of curriculum development.*
- *Analyze the concern and issues of curriculum development.*
- *Distinguish the different approaches to curriculum development.*
- *Explain the various models of curriculum.*
- *Understand the integrated and interdisciplinary nature of learning experiences.*

Detailed Course Content:

Unit 1: Understanding Curriculum

- Curriculum : Concept - Difference between curriculum and courses of studies/syllabus, Functions (as Product, Process and Programme), Components (core and elective);
- Bases of Curriculum : Philosophical, Psychological and Sociological;
- Types/Approaches: Subject-centred, Activity-centred, Learner-centred, Learning-centred, Humanistic - Meaning and characteristics;
- Curriculum Policy and Framework: Mandates for formulation of curriculum policy-constitutional, socio-cultural, environmental, economic, political, global concerns; Curriculum Framework - concept, components/coverage, principles of development; NCF2005 and NCFTE-2009 with reference to their objectives, principles and recommendations.

Unit 2: Curriculum Development

- Determinants - Socio-economic, Political, Cultural, and Educational;
- Principles: Need-based, Relevance, Flexibility, Cotextuality etc.
- Process/Stages - Need Identification, Identification of resources and strategies, preparation, sharing and feedback, finalization at different levels (National, State, and Institution) ;
- Issues and concerns in curriculum development : Centralized and decentralized processes, Plurality, Political, Cultural, Relevance, Rigidity for no-renewal.

Unit 3: Models of Curriculum Development

- Models
  - ✓ Tyler's Model (1949)
  - ✓ Hilda Taba, 1962 Model
  - ✓ Nicholls and Nicholls Model (1972)
  - ✓ Willes and Bondi – 1989 Model
  - ✓ Futuristic Model
  - ✓ Need Assessment Model

(Each model be discussed in terms of their basic focus, structure, process and relevance)

Unit 4: Curriculum Transaction, Evaluation and Renewal

- Classroom Transaction: Planning (time, space, manpower, material and scheme and plan of lessons), Preparation of curricular materials and activities(text and support materials, learning activities), mode of transaction and learners' involvement- resource management (use of TLMs, activity and question banks etc), use of assessment mechanism for learning;
- Evaluation: Mode (internal and external), periodicity (continuous, periodic), Mechanism (research studies, on-site observation, FGD, on-line feedback);
- Renewal: Use of evaluation feedback / inputs for
  - Immediate / long-term revision
  - Specific / comprehensive improvement;
- Current provisions and practices for curriculum development, transaction, evaluation and renewal in School Education and Teacher Education in the State.

Sessional Work:

Each prospective teacher educator is required to submit assignments on ***any two*** of the following:

- Appraisal of the present D.El.Ed. curriculum in Odisha in the light of NCTE's recent norms and standards (2014) and the issues and requirements of elementary education in the state.
- Appraisal of a textbook in a subject of any class in the light of the recommendations of NCF-2005.
- Evaluation of a textbook in a subject of any class in the light of learner-centered and community-centered considerations.
- Developing a design with suggestions for improving a textbook of any subject to make local specific in terms of socio-cultural and environmental issues.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

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

Chary, Ryland, W., (1969); *Humanizing the school curriculum development and facts.* California; Corsion Press.

Denis Lawton and et al. (1978). *Theory and practice of curriculum Studies*, London: Routledge and Kegan Paul.

Dewey, John (1966). *The child and the curriculum*. Chicago: University of Chicago Press.

Doll Ronald C. (1986). *Curriculum improvement: Decision making process*. London: Routledge and Kegan Paul

Erickson, H.L (2002). *Concept based curriculum and instruction: Teaching beyond the theory.* New York; Random House.

Gwynn, Minor, J. and Chase, John B., (1969). *Curriculum principles and social trends.* New York; Macmillan Co.

McKernan, James (2007): *Curriculum and imagination: Process, theory, pedagogy and action research.* London: Routledge.

NCERT (1984). *Curriculum and evaluation*. New Delhi.

NCERT (2000). *National curriculum framework for school education*. New Delhi.

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

NCERT (2006). *Systematic reforms for curriculum change*. New Delhi.

NCTE (2009). *National curriculum framework for teacher education 2009*. New Delhi.

UNESCO (1981). *Curriculum and lifelong education*. Paris: UNESCO.

Verduin J. R. (1967). *Cooperative curriculum improvement*. Prentice Hall.

Whecker D. K. (1967). *Curriculum process*. London: University of London Press.

Wiles, J.W. & Joseph Bondi (2006): Curriculum Development: A Guide to Practice. New York: Pearson Publication.

PPP: Pedagogy Processes And Practices

Semester-I	Credit-4
Marks 100 (Ext. 70+ Int.30)	**Contact Hours-64**

Objectives:

On completion of the course the prospective teacher educator shall:

- *Specify different aspects of quality learning and the issues affecting quality of classroom learning.*
- *Understand various approaches and methods of learning and teaching.*
- *State the importance of teaching learning materials and their management in classroom situation.*
- *Elaborate the processes of classroom management for promoting effective learning.*

Detailed Course Content:

Unit 1: Quality in Classroom Learning

- Dimensions of Quality Education: Learners, Learning Environment, Content for Learning, Process of Learning and Teaching, Learning Outcomes; Concepts and indicators for each quality dimensions,
- Facilitating quality learning - Teaching as instruction, teaching as facilitation of learning; Situated/Contextual learning,

- Facilitating classroom learning, Learning beyond classroom, Linking classroom learning to real life experiences,
- Teacher as facilitator of learning: Knowledge of content and pedagogy, Understanding learners and their needs, Choosing/innovating appropriate pedagogy to address individual learning needs.

Unit 2: Approaches to Learning and Teaching

- Approaches: Subject-centred, Teacher-centred, Learner-centred and Learning-centred,
- Methods of Learning and Teaching: Effective methods for promoting learning; Instructional methods- Lecture, Demonstration, Inductive and Deductive; Learner-centered methods- Play way, Project, Problem solving, Discovery,
- Activity-based Approach: activity and its elements, characteristics of activity varieties of activity -curricular and other curricular, activities for learning concrete and abstract contents,
- Constructivist approach to learning: Characteristics of meaning making; Methods- 5E Model and ICON (General characteristics).

Unit 3: Teaching Learning Materials

- Importance of TLMs in classroom transaction,
- Types and Use of TLMs: No cost and low cost materials; Contextual and local-specific TLMs; Collection, preparation, storing and use of TLMs,
- Textbooks, workbooks and reference books as learning materials; Learning beyond textbooks – other sources of learning,
- ICT material as resources for teaching and learning, Open Education Resources and their use in curricular activities and teacher development programmes.

Unit 4: Classroom Management

- Management with Key Resources: Key Resources – Group and Paired work, Talk for learning, Use of local and community resources, Questioning to promote learning, Storytelling, songs, role play and drama, Involving all, Monitoring and giving feedback, Assessing progress and performance,
- Managing multi-grade and multi-level situations: different forms of multi-grade situations, Ways of management of multi-grade situations; Multi-level situation- characteristics, management of multi-level situation in a classroom, Problems of large size classrooms and its management,
- Planning for Curriculum Transaction: Need for planning, Types of Planning- Yearly, quarterly, monthly and daily plans; Planning for specific purposes- time management, space management, multi-grade and multi-level management,
- Planning Lessons: Need and importance of lesson planning, Steps of a lesson plan – Preparatory activities, Activities during transaction, and Activities after transaction – Content and Characteristics of each step.

Sessional Work:

Each prospective teacher educator is required to submit assignments on ***any two*** of the following:

- Developing a paper of quality of classroom transactions in the elementary secondary schools of the state.
- Prepare a seminar paper on comparative effectiveness of different approaches of classroom transactions.

- Prepare a survey report on the types and modes of use of TLMs in the classrooms of elementary and secondary schools,
- Develop monthly plan of curriculum transaction on any one school subject taught in a specific class.
- Prepare activities (in sequential order) on any two curricular topic as prescribed for a class (either elementary or secondary) for classroom transaction within a specified duration.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

Government of India (2005). *National curriculum framework, 2005*. New Delhi: NCERT.

Haynes, Anthony (2010). *The complete guide to lesson planning and preparation*. New York: Continuum International Publishing Group.

NIOS (2012). *Pedagogic processes in elementary schools 502 (Blocks 1- 4): Self learning material for Diploma in Elementary Education Programme*. New Delhi: National Institute of Open Schooling.

TESS India (2014). *Key resources*. *www.TESSIndia.edu.in*

UNESCO (2002). *Information and communication technology in teacher education: A curriculum for schools and programmes of teacher development*. Paris: Division of Higher Education, UNESCO.

UNICEF (2000). *Defining quality in education*. A paper presented by UNICEF at the meeting of The International Working Group on Education Florence, Italy June 2000. New York: Education Section Programme Division United Nations Children's Fund.

Weimer, M. (2002). *Learner-centered teaching*. San Francisco: Jossey-Bass.

PSS-A P.1 : Pedagogy of Mathematics (Paper-1)

Semester-I	**Credit-4**
Marks 100 (Ext. 70+ Int.30)	**Contact Hours-64**

Objectives:

On completion of the course the prospective teacher educator shall:

- *Understand the nature, scope, and values of Mathematics and its place in the school curriculum.*
- *Specify comprehensively the objectives of teaching and learning Mathematics at the elementary levels of school education.*
- *Develop long term and short term plans along with daily lesson plans for teaching and learning mathematics at the school stage.*
- *Understand different approaches and methods of teaching and learning mathematics.*
- *Develop plans along with tools and procedures for conducting continuous and comprehensive assessment of and for students' leaning mathematics.*

Detailed Course Content:

Unit 1: Foundations of Mathematics Education

- *Nature of Mathematics*: Nature and Scope of Mathematics, Nature of Mathematical propositions, Mathematical proof, structure and logic;
- *Values of Mathematics*: Cultural, Disciplinary and Utilitarian values. History of Mathematics with special reference to Indian Mathematics. Place of Mathematics in School Curriculum, Correlation of Mathematics with other subjects; Contribution of the Indian Mathematicians, Vedic Mathematics
- *Learning of Mathematics*: Importance of Mathematics at elementary level, Goals and vision of Mathematics education, Objectives of teaching-learning Mathematics at the primary and upper primary levels,
- *Curriculum Reforms in School Mathematics*: Rationale, objectives, principles, designs and materials in Mathematics, recent curricular reforms at the National and State levels (NCF 2005).

Unit 2: Methods of Teaching Learning Mathematics

- *Learning by Discovery:* Nature and purpose of learning by discovery; guided discovery strategies in teaching Mathematical concepts; Project and Play way methods;
- *Teaching for Understanding Proof:* Proof by induction and deduction; Proof by analysis and synthesis;
- *Problem Solving in Mathematics*: Importance of problem solving in Mathematics, Steps of problem solving in Mathematics, Problem Posing, Generating and solving real life problems using Mathematical principles, Situation model for solving word problems;
- *Constructivist approaches:* Self-learning and peer learning strategies, Activity-based approaches.

Unit 3: Curricular Activities in Mathematics

- *Activities in Mathematics*: Mathematics Games and Quiz, Mathematics Exhibition, Planning and organizing, Mathematics outside the classroom. Planning classroom activity banks;
- *Learning Materials in Mathematics*: Types, functions, preparation and utilization of learning materials - Textbook, Models, Calculators and computers, Maintaining portfolio in Mathematics;
- *Key Learning Resources in Mathematics*: Assessing progress and performances, Monitoring and giving feedback, Local and community resources, Using pair work, Using group work, Using questioning (both by teacher and learners) to promote thinking, Talk for learning and Involving all;
- Importance of Lesson Notes and Reflective Journals by Mathematics teachers, Preparation, use and follow up of lesson notes and reflection notes.

Unit 4: Designing Learning Experiences in Mathematics

- *Planning Mathematics Teaching-Learning*: Yearly plan, Unit plan, Lesson plan; Elaborating specific steps and contents in each step of each type of plan;
- *Content categories in Mathematics:* Facts, Concepts, Illustrations, Generalizations etc. Mapping of Mathematics contents at the elementary stage, Integration of Mathematics contents with other subjects at the elementary stage;
- Developing lesson plans in specific contents in Mathematics for beginners and learners at the elementary school stage: Specifying objectives, assessing related previous experience, choice of methods, activities and materials for transaction,

Making Mathematics lessons joyful for learners relating the problems to real life situations;

- *Assessing Mathematics Learning at the Elementary Stage*: Assessment for learning - informal and formal methods, Assignment, Project and Portfolios; Assessment of learning mathematics- Unit tests; Non-testing methods of assessing learning of Mathematical concepts; Remedial and Enrichment programmes in Mathematics at elementary stage; Planning for continuous assessment of classroom learning in Mathematics.

Sessional Work:

Each prospective teacher educator is required to submit assignments on ***any two*** of the following:

- Collection of the names of Mathematicians and preparation of a report about their contribution to Mathematics.
- Group activity for preparation of concept maps on any topic of school mathematics.
- Development of learning activities on different topics of Mathematics (at least 5 activities on any 2 topics
- Preparation of Annual, Monthly and Unit Plans for teaching-learning Mathematics.
- Development of Lesson plans in Mathematics
- Reflective paper on any problem of teaching and learning mathematics in a socio-cultural context.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

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.

IGNOU (2000). *Learning Mathematics: Encouraging learning in the classroom* (LMT- 01). New Delhi: Schools of Science, IGNOU.

James,Anice(2005). *Teaching of mathematics*. Hyderabad: Neelkamal Publications.

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.

NIOS (2012). *Learning mathematics at elementary level 504 (Blocks 1- 3): Self learning material for Diploma in Elementary Education Programme*. New Delhi: National Institute of Open Schooling

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.

Tess India (2014). *Key Resources*. *www.TESSIndia.edu.in.*

Shetty, Balkrishna(2013). *What is mathematics?* NewDelhi: National Book Trust. Skemp,R.R., (1971), The Psychology of Learning mathematics, Penguin Books .

Wood, T., Cobb, P. & Yackel, E. (1995). Reflections on learning and teaching mathematics in elementary schools. In L.P.Steffe & J.Gale(Eds.), *Constructivism in education.* Hillsdale: Lawrence Erlbaum Associates.

PSS-A P.1 : Pedagogy of First Language-Odia (Paper-1)

Semester-I	**Credit-4**
Marks 100 (Ext. 70+ Int.30)	**Contact Hours-64**

Objectives:

On completion of the course the prospective teacher educator shall:

- *Understand the processes of and approaches to language acquisition and learning in first language.*
- *Explain the factors influencing language acquisition and learning in Odia with particular reference to language context and input rich classroom environment.*
- *Identify methods, approaches and materials for teaching Odia at different levels.*
- *Develop language activities and tasks for the learners including audio-visual materials and ICT.*
- *Develop proper study skills and reference skills for acquiring proficiency in basic language skills in Odia.*
- *Prepare plans based on the teaching learning objectives for their classroom transaction with reference to Odia prose, poetry, grammar and composition.*

Detailed Course Content:

Unit 1: Acquisition and Learning of First Language

- Language acquisition and language learning in first language with reference to Odia – Their meaning and processes; Approaches/Theories of First Language Acquisition (FLA): Behaviourist (Watson & Skinner), Nativist/Mentalist (N.Chomsky) and Social Interactionist (Piaget & Vygotsky)
- Factors influencing FLA: Age, Language input, Language anxiety, Language aptitude, Language ego & motivation; Language input rich classroom environment facilitating language acquisition and language learning in Odia
- Policies and relating to languages: Article 343-351,350A; NPE-1968, NPE-1986; POA 1992; National Curriculum Framework-2005; Importance and place of first language at different stages in school curriculum - compulsory subject, medium of instruction and

examination etc.; Objectives of teaching first language at elementary and secondary levels with reference to NCF 2005.

- Current challenges of teaching - learning first language in schools: multi-lingual context, language background of the learners, syllabus and textbooks, classroom transaction mode and teacher quality.

Unit 2:Developing language skills in First Language (Odia): **Listening, Speaking, Reading and Writing**

- Listening and Speaking: Sub skills and types/ forms; Activities for developing listening and speaking skills: storytelling, dialogues, situational conversations, role plays, simulations, speech, games, contexts etc.; Materials and resource support: language laboratories, pictures, authentic materials, multi-media resource etc.
- Reading: Sub skills; kinds - reading aloud and silent reading, extensive and intensive; Study skills: meaning, strategies for developing study skills – use of thesauruses, dictionary, encyclopedia etc.,
- Writing: Mechanics of writing, methods of teaching writing at elementary and secondary levels; Formal and Informal writing: creative writing (short story, poem), reflective writing (essay, articles), letter, diary, notices, reports, dialogue, speech etc.
- Facilitating integration of four language skills while using first language in classroom processes and real life situations; Reference skills and higher order skills in reading and writing

Unit 3: Methods and Techniques of Teaching Learning First Language

- Understanding the meaning of method and techniques and their differences
- Methods: 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 4: Planning Teaching- Learning in First Language

- 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-learning Prose (detailed and non-detailed): Objectives, transactional strategies following communicative and constructivist approaches(5E and ICON Model)
- Teaching-learning Poetry: Objectives, transactional strategies following communicative and constructivist approaches(5E and ICON Model) Teaching-learning Grammar: Functional and Formal Grammar; Objectives & Transactional strategies
- Teaching-learning Composition and Vocabulary:
  - Objectives of teaching learning composition; Types of composition (guided and free);Teaching-Learning strategies for different forms of composition(Essay, Letter, Noting and Drafting);
  - Types of vocabulary (Tadbhaba, Tatsama, Baideshika, Desaja); Word formation process (Use of Upasarga and Pratyaya; Derivation from Sandhi and Samasa- their uses in different forms and meanings);Teaching –Learning strategies for vocabulary; Facilitating correct spelling of words – causes of spelling errors and remediation.

Sessional Work:

Each prospective teacher educator is required to submit assignments on ***any two*** of the following :

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

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

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

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

Mohanty, B. (1970). *Odia bhasara utpati O 27arma 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 Rajya Pathya Pustaka Pranayana Sanstha

PSS-A P.1: Pedagogy of Language-English (Paper-1)

Semester-I	Credit-4
Marks 100 (Ext. 70+ Int.30)	Contact Hours-64

Objectives:

On completion of the course the prospective teacher educator shall:

- *Analyze the issues relating to importance and place of English in school curriculum, acquisition of skills in English, realization of aims and objectives of learning English and language policy as conceived in NPE, 1986 and NCF – 2005.*
- *Use various methods, approaches and strategies for teaching-learning English and transact various types of lesson plans covering all aspects of English language following different approaches.*
- *Plan strategies for improving language skills of the learners through transaction of texts.*
- *Develop the ability of creating input rich classroom environment for teaching learning English.*

Detailed Course Content:

Unit 1: Acquisition and Learning of Second Language

- Language acquisition and language learning: Meaning and differences- Psychology of language acquisition and learning – behaviouristic, cognitive and constructivist views.
- Language acquisition and language learning in L2- meaning and process: Importance of language context and input rich classroom environment facilitating language acquisition and language learning
- Importance of English language in India and the world; Policies and provisions relating to languages: Article 343-351,350A; NPE-1968, NPE-1986; POA 1992; National Curriculum Framework-2005.
- Place of English in school curriculum: compulsory subject, medium of instruction and examination etc.; Aims and objectives of teaching and learning English at elementary and secondary levels
- 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 2: Developing Language Skills in English:

- Listening: Speaking : Their Sub skills and types/forms; Activities for developing listening and speaking skills: storytelling, dialogues, situational conversations, role plays, simulations, speech, games, contexts etc.; Facilitating integration of listening and speaking skills while using English in real life situations
- Reading: Sub skills; kinds – reading aloud and silent reading, extensive and intensive
- Writing: Mechanics of writing; methods of teaching writing at elementary and secondary levels; Formal and Informal writing: creative writing(short story, poem), reflective writing (essay, articles), letter, diary, notices, reports, dialogue, speech, advertisement etc.
- Integration of language skills in curriculum transaction: Processes and strategies

- Materials and resource support: Language laboratories, authentic materials, multimedia resources, Open education resources.

Unit 3: Approaches, Methods and Techniques of Teaching-Learning English Language

- Understanding the meaning of approach, method and techniques and their differences
- Approaches: Structural-oral-situational approach, Communicative approach, Silent way, Suggestopedia, Total Physical Response(TPR) with reference to their meaning, focus, principles, techniques, advantages and limitations
- 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 4: Planning Teaching- Learning in English Language

- 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-learning Prose (detailed and non-detailed): Objectives, transactional strategies following communicative and constructivist approaches (5E and ICON Model) Teaching-learning Poetry: Objectives, transactional strategies following communicative and constructivist approaches (5E and ICON Model)
- Teaching-learning Grammar: Functional and Formal Grammar; Objectives & Transactional strategies
- Teaching-learning Composition and Vocabulary: Objectives of teaching learning composition and vocabulary, Teaching-Learning strategies for different forms of composition(Essay, Letter, Noting and Drafting),Teaching –Learning strategies for vocabulary- word formation(affixation, blending, back formation), their uses in different forms and meaning(action, qualities etc.)

Sessional Work:

Each prospective teacher educator is required to submit assignments on ***any two*** of the following :

- Preparation of 5 Lesson Plans on the topics from the prescribed text following 5E and ICON Model (at least two plans in each model)
- Preparation of a blue print on any topic from the prescribed text and development of test items in conformity with the blue print
- Preparation of a paper on the problems and challenged of teaching learning English at elementary/secondary level in Odisha.
- Designing various activities/language games for facilitating learning of English.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

Bansal, R.K. (1971). *An outline of general phonetic*s. Bombay : Oxford University Press

Bansal, R.K. and Harrisson, J.B. (1972). *Spoken English for India*. Madras : Orient Longman

Baruah, T.C. (1984). *The English teachers handbook.* New Delhi : Sterling Publishers

Billows, F.N. (1961). *The techniques of language teaching*. London : William Heffer and Sons.

Carrol, J.B. (1972). *Systems and structures of english*. London: Oxford University Press.

Das, B.K. et al. (2009). *An introduction to professional english and soft skills*. New Delhi : Cambridge University Press

Dodson, C.J. (1963). *The bilingual method*. London : Pitman Publishing.

Frisby, A.W. (1970). *Teaching english: notes and comments*. London: ELBS.

Gokak, V.K. (1963). *English in India: Its present and future*. New Delhi: Asia Publishing House.

Harish David, P. (1969). *Testing english as second language*. New Jersy : McGraw Hill

Hornby, A.S. (1962). *The teaching of structural words and sentence patterns*. London: Oxford University Press.

Jones, Daniel (1967). *An outline of english phonetics*. London : William Heffer and Sons

Kohli, A.L. (1970). *Techniques of teaching english*. Jalandhar : Dhanpat Rai and Sons.

Krishna Swamy, N. and Sri Raman, T. (1994). *English teaching in India*. Madras : T.R. Publication.

Palmer, H.E. (1980). *Grammar of spoken english*. Cambridge: Heffer.

Prabhu, N.S. (1989). *Second language pedagogy*. New Delhi : Oxford University Press

Sachdeva, M.S. (1973). *A new approach to teaching of english in India*. Ludhiana : Prakash Brothers

Saraswati, V. (2004). *English language teaching*. New Delhi : Orient Longman

Sharma, A.K. (1985). *Aspects of english language teaching in India*. New Delhi : Bharat Book Depot.

Sinha, S.P. (1978). *English in India*. New Delhi : Janaki Prakashan

PSS-A P.1 : Pedagogy of Biological Science (Paper-1)

Semester-I	**Credit-4**
Marks 100 (Ext. 70+ Int.30)	**Contact Hours-64**

Objectives:

On completion of this course, the prospective teacher educators shall:

- *State the nature and importance of Biological Science and its relevance in secondary school curriculum in context with recent curriculum reforms in School Curriculum.*
- *Use various methods and approaches to teaching-learning Biological Science suitable for the secondary school classes.*
- *Plan units' lessons in Biological Science using traditional and constructivist approaches for effective classroom transactions.*
- *Develop and collect activities and resource materials for their use in enhancing quality of learning of Biological Science at the secondary level.*

Detailed Course Content:

Unit 1: Biological Science in School Curriculum

- Nature of Biological Science: Nature and Scope of Science and Biological Science in particular, Bio-science as a discipline, as a dynamic and expanding body of knowledge
- Place of Biological Science in school curriculum, Importance of Biological Science in daily life,
- Objectives of teaching-learning Biological Science at elementary and secondary school level,
- Curriculum Reforms in Science Education: Rationale, objectives, principles, designs and materials in Science, recent curricular reforms at the National and State levels (NCF 2005).

Unit 2: Approaches and Methods of Teaching-learning Biological Science

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

Unit 3: Planning for Teaching and Learning in Biological Science

- Need for planning teaching-learning experiences in Biological Science
- Identification of Concepts and unifying themes related to Biologica Science, inter-relation among various concepts in Biological Science
- Designing of Year plan and Unit Plan in Biologica Science and its significance in understanding comprehensive nature of knowledge
- Writing learning objectives for different content areas in Biological Science
- Planning lessons based on behaviourist and constructivist approaches-5E model, ICON model considering learners with different pace,
- Assessment of learning in classroom

Unit 4: Curricular Activities

- Teaching-Learning Materials in Science: Preparation, collection, procurement and use of teaching-learning materials in Science like, Charts, Graph, Bulletin Board, Models, ICT materials like Filmstrips, Slides, Transparencies, TV, Audio and Video, Computer, and Internet;
- Learning Activities – Science laboratory activities; Observing flora and fauna in their natural setting, Science Club, Science Seminar, Preservation of biological specimens for learning and building Biological Museum, Science Exhibition
- Using Key Learning Resources for effective classroom transaction in Science

Sessional Work:

Each prospective teacher educator is required to submit assignments on ***any two*** of the following:

- Preparation of year plan and unit plan for teaching Biological Science in any one class.
- Preparation of five lesson plans on any topic of Biological Science included in the Science textbook for the secondary schools.
- Developing five activities/experiments in Biological Science and prepare a brief report,
- Collection and preservation of biological specimens from the immediate environment (at least five, selecting minimum two each from preservable plants and animals/insects)

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

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

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

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

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

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

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

TESS India (2015). *Key resources.* The Open University U.K. (*http//creativecommons.org /licences/* and *http//www.tess-india.edu.in/*)

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

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

PSS Pr.-I : School Exposure

SI-I: School Internship-I

Semester-I	Credit-4
100 Marks (Internal)	Contact Hours-4 Weeks

One must have the experience of the situation and content where one is expected to work. A teacher educator / teacher is ultimately concerned with school environment, class room practices, learning situations, social context and the trend of learning outcomes of students in the school. Hence in any teacher education programme, school exposure is an important component which ought to take place at the initial stage of internship programme.

Objectives:

On completion of this course, the prospective teacher educators shall:

- *Acquaint themselves with available infrastructure and facilities in the schools and classrooms*
- *Observe daily activities of the schools (curricular, other curricular and management etc)*

- *Acquaint themselves with the curricular contents of different grades*
- *experience classroom teaching learning processes, pedagogy interventions, day to day school administration / management and school community interface and collaborative practices*
- *Understand the roles and responsibilities of the teachers for curricular, other curricular, co-curricular and administration related activities*
- *Interact with students, teachers, and SMC/SMDC members and other stakeholders and understand their roles in school activities.*
- *Develop comprehensive idea about a complete school situation*.

Based on the aforesaid objectives of the School Exposure Programme, the concerned TEIs/University Departments shall spell out the related activities/tasks for the prospective teacher educators asking them to perform the same and submit activity/dimension–wise reports through their mentors to the head of the TEI/University Department for internal assessment and recording of results to be reflected in the final certificate.

Details of the Programme:

The programme shall be conducted in 3 (Three) phases: Preparation, School Exposure, and Post-Exposure. The broad framework of activities during each phase has been spelt out below.

A.Preparation - (*03 days*)

1. Organization of one day interaction and sharing with the school heads and teachers – on the objectives and designing of the programme and their cooperation and feedback.
2. Organization of two day orientation programme of the prospective teacher-educators on the objectives, modalities, reporting and sharing of school exposure experiences and allotment of schools

   The TEI/University Department concerned is to work out the mechanism for monitoring the programme and providing onsite support.

B.School Exposure – (*18 days*)

The respective institute is to design the details of the exposure activities on the following aspects.

1. Observation of different aspects of the school and recording school details – Name, Address, Location, Contact number, Back ground information, year of formation, category, management of time, SMC, medium of instruction, number of students and staff (teaching, non-teaching), Infrastructure – Building (type), rooms, laboratory, Library, Kitchen-cum-store, dinning arrangement, Common room; Facilities- Water and sanitation, Ramp, Garden, Play ground, Kitchen Garden etc; TLM and Equipments– Black board/White board, Maps, Models and Charts, Projector etc; Records – Official and academic records and registers; Observation of classroom – Physical condition of classroom, Teachers Learning Process, teachers behavior and classroom interaction; Examination – type and modes, maintenance of records; Teacher maintained academic registers; Other records relating to SMC / SMDC / PTA / MTA meeting.
2. Other activities of the school, co-curricular activities (Red Cross, Scout and Girls NCC), social activities and extension activities, observation of national and international days, cultural celebration etc.
3. District-level school achievements in games and sports, Board Examination, Library activities and any other.

The Institute/Department is to develop the required observation schedule enabling the prospective teacher-educators to record their observation of the school activities.

C. Post- Exposure - (03 day)

1. Preparation of report on different aspects observed by the prospective teacher educators in schools.
2. Sharing of observation reports and feedback

Assessment Criteria

Activities	Marks
1. Reporting on School Infrastructure and Physical Facilities	20
2. Reporting on Academic Support	20
3.Reporting on Other Curricular Activities	20
4.Reporting on Functioning of SMC/SMDC, PTA, MTA	20
5.Presentation and Sharing of Overall Report	20
TOTAL	**100**

SECOND SEMESTER

PC-4: Historical, Political and Economic Perspectives of Education

Semester-II	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours-64

Objectives:

On completion of the course, the prospective teacher educator shall:

- *Elaborate the genesis of expansion of education during pre-independence in India.*
- *Describe the evolution of policies in education and their mandates for development of quality education in post-independent India.*
- *Explain the political perspectives in education in India in respect of policy formulation and implementation of educational programmes.*
- *Explain the bearings of plan provisions and priorities in education during post-independence period and the shortfall thereof.*
- *Understand the implications of emerging concerns for education and the inbuilt problems and issues.*

Detailed Course Content:

Unit 1:Education in India: Pre-independence Scenario

- Education in the ancient period (Pre-vedic and Vedic)
- Education in the Budhist period
- Education in the medieval period
- Education under British Rule – Educational activities of East India Company up to 1813, Macaulay's Minutes (1835), Wood's Despatch (1854), Hunter Commission Report (1882), Sargent Committee Report (1944)
- Expansion of Education in India till Independence

Unit 2: Education in India Post-independence Scenario

- Constitutional Provisions for Education
- Commissions for Educational Development : University Education Commission (1948-49) , Secondary Education Commission (1952-53), The Education Commission (1964-66)
- National Policies on Education (1968, 1986/1992)
- National System of Education : National objectives, National structure,
- National Curriculum Frameworks

Unit 3:Political Perspectives

- Education and Politics : Their relationship; Politicization of Education : Nature and implications
- Impact of Politics on various aspects of Education with reference to curriculum, freedom and discipline, role of teacher and methods of teaching
- Education under Democracy : Rights-based Education
- Education under Marxism and Neo-Marxism

Unit 4:Economic Perspectives

- Education and Economics : Their Relationship; Education as an investment – return / input - output approach; Economic Development and Role of Education
- Human Resource Development (HRD) and Education: Indicators of HRD; Human Development Index - Components and Measurement; Role of Education for HRD
- Five year plans and investment in Education according to priorities
- Economic development in the perspectives of globalization and liberalization and its impact on Education in India

Sessional Work

Each prospective teacher educator is required to submit ***any two*** assignments from the following:

- Preparation of an appraisal report on national policies on education in India and implementation of their provisions.
- Prepare a seminar presentation on changing political scenario and its impact on teacher education programmes in India.
- Survey of Human Development Index during the 11th plan in Odisha and its implications for policy and planning in education.
- Prepare a seminar presentation on education as a liberal and professional discipline for teacher preparation and teacher development.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

Baskin, Wade. (1966).*Classics in Education*.Vision: Press London.

Brubacher, John S. (1969).*Modern Philosophies of Education.* New Delhi:Tata McGraw Hill.

Broudy, H.S.(1977).*Building a Philosophy of Education*. New York:Kriager.

Chauble, S. P. (1955). *A History of Education.*Allahabad:Bharat Publication.

Dupuis, A.M.(1972).*Philosophy of Education in Historical Perspective*. New Delhi:Thomson Press.
Gore, M.S. (1984). *Education and Modernization In India*. Jaipur:Rawat Publishers.

Karbir Humayun. (1961).*Education in New India*. New Delhi: Asia Publishing House.

Kneller, George F. (1978). *Foundations of Education*. John Wiley and Sons.

Mukherjee, S.N. (1955). *History of Education in India*. Baroda: Acharya Book Depot. New Delhi: National Publishing House.

Mukerji S. N. (1960). *Education in India To-day &Tomorrow* .Baroda :Acharya Book.

Narvane, V.S. (1978). *Modern Indian Thought*. , New York:Orient Longmans Ltd.

Nurullah&Naik.(1951). *History of Indian Education*. Bombay: Macmillan & Co.

Power, Edmund, J., Main Currents in the History of Education, McGraw Hill Book Co.Inc., New York, 1962.

Panday, V.C.(2005). *Value Education and Education for Human Rights*. Delhi: Isha Books.

Passi, B. K. (2004). *Value Education*.Agra: National Psychological Corporation.

Rawat, P.L. (1956). *History of Indian Education.*AryaBhait Publication.

Sandeep, P. & C. Madhumathi (2008). *Philosophical and Sociological Foundations of Education*.Secunderabad: Veera Educational Services & Consultants Pvt. Ltd.

Shanna, Ramnath. (2000). *Textbook of Educational Philosophy* .New Delhi: Kanishka publishers.

Sharma, Yogendra K. (2001). *History & Problems of Education*.Vol I. New Delhi.

Somnath, Agrawal. (2007). *Philosophical Foundations of Education*. Authors Press.

Taneja, V.R. (2006): Foundation of Education. Mahindra Capital Publishers, Chandigarh.

Thakur, A. S. & Berwal, S. (2007). Education in Emerging Indian Society; Vikas Publication.

Wingo, Max (1975). Philosophies of Education – An Introduction, London: Oxford University Press.

PC-6: Learner and Learning

Semester-II	**Credit-4**
Marks 100 (Ext.70+Int.30)	**Contact Hours-64**

Objectives:

On completion of the course the prospective teacher-educator shall:

- *Conceptualize a framework of learning in terms of diverse contexts and approaches to learning and learning environment.*
- *Reflect on the process of learning from the point of view of different theoretical perspectives and the need to adopt appropriate approach.*
- *State the differences among the different theoretical explanations of learning and provide appropriate justifications to the present teaching-learning practices.*
- *Elaborate the cognitive processes involved in acquiring learning experiences.*
- *Explain the importance of motivation and the strategies to motivate the learners for learning.*
- *Describe different forms of learner's engagement in and out of classroom while learning.*
- *Identify the characteristics of individual differences among the learners and adopt appropriate strategies to meet the individual learning needs.*
- *Assess the learner's progress using multiple tools and techniques on a continuous basis ensuring quality of learning at each stage of learner's growth.*

Detailed Course Content:

Unit 1: Framework of Learning

- Learning: Meaning and nature (Learning as process and outcome); characteristics-intentional, conscious, rational, conceptualization, abstraction and mediated by language; Approaches to learning - Knowledge-centric, Experience-centric and Evaluation-centric; Learner-centered and Learning-centered approaches - Concept, Purposes and Limitations

- Learning Environment: Classroom, School and Community environments facilitating learning; Inclusive environment in classroom; Use of local knowledge and children's out-of- school experiences in learning; Diversities in learning contexts - Linguistic, Ethnic, Social and Cultural
- Facilitating Learning: Motivation- Meaning, Types (Intrinsic and extrinsic); Strategies for motivating learner
- Facilitating Learner Engagement: Types of engagement - modeling, observing, demonstrating, exploring, analyzing, contextualizing, collaborating, multiple interpretations, critical reflection (based on action, observation, selected reading, discussion etc.).

Unit 2: Understanding the Process of Learning

- Categories of learning: Gagne's hierarchical theory; Critical appraisal of the basic conditions of learning
- Various theoretical perspectives on human learning: Behavourist, (Thorndike, Pavlov, Skinner), Humanist (Rogers, Maslow, Bandura), Cognitive (Ausubel, Bruner, Piaget), Constructivist (Piaget, Vygotsky) with reference to their classroom implications(applicability in learning situation and role of the learning in varied learning context)
- Learning as transmission and reception of knowledge Vrs learning as construction of knowledge; Processes facilitating knowledge construction- experiential learning and reflection, social mediation, cognitive negotiation, situated learning and cognitive apprenticeship
- Cognitive processes and learning – memory, perception, logical thinking, critical thinking, development of concept, problem solving

Unit 3: Meaningful learning

- Meaning and attributes - active or manipulative, constructive, reflective, intentional, complex, contextual, collaborative and conversational;
- Learning as meaning making: Concept and process of meaning making; Learner as meaning maker- Characteristics of learner as meaning maker curiosity, interest, active engagement: Role of inquiry in meaning making
- Meaning Learning as Experiencing: Observing, Perceiving and internalizing and Deriving meaning form experiences;
- Strategies for facilitating Meaning Learning in and out of school: Role of teacher

Unit 4: Understanding differences in individual learners to facilitate learning

- Conceptual framework of understanding dimensions of differences in individual learners (with reference to individual attributes and socio cultural contexts); Differences in learners based on predominant 'learning styles'; Implications of learning styles for teachers
- Understanding differences based on cognitive abilities in children: Giftedness, Creativity, Learning disability, Low intellectual functioning (slow learner) and Under-achievement; Understanding learners with deviant behaviours: Attention deficit disorder with or without hyperactivity, Autism, Conduct disorder etc.,
- Methods/techniques of identifying individual differences: questionnaire, observation, interview, self reporting techniques, anecdotal records, case study, psychological and educational tests; Use of local knowledge and children's out of the school experiences in learning.

- Developing a confident learner- self esteem, self concept, self efficacy, locus of control and personality; Facilitating learning environment: Teacher's attitude, positive emotion, self efficacy, collaborative and self regulated learning

Sessional Work:

Each prospective teacher educator is required to submit ***any two*** assignments from the following:

- Preparation of a write-up on "Addressing diversities in learning contexts: Role of teacher and peer group"
- Preparation of a set of learning activities for different forms of learner engagement in and out of classroom, while learning
- Preparation of a case study on an exceptional adolescent learner
- Observation and identification of elements of constructivist learning in classroom situation and preparation of a report.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Reading:

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

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

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

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

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

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

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

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

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

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

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

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

PC-10: Learning Assessment

Semester-II	Credit-2
Marks 50 (Ext.35+Int.15)	Contact Hours-32

Objectives:

On completion of the course, the prospective teacher-educator shall :

- *Conceptualize the nature, purpose and types of educational assessment and evaluation.*
- *Develop and use different types of tools and techniques for continuous and comprehensive assessment of learning in the school situation.*
- *Explain the importance of assessment for learning and its processes for enhancing the quality of learning and teaching*
- *Analyze the trends and issues in learning and learner assessment.*
- *Analyze and interpret results of the assessment using rudimentary statistical methods.*

Detailed Course Content:

Unit 1: Assessment, Evaluation and Learning

- Assessment and Evaluation: Meaning, ; purpose of assessment (improving learning and teaching); purpose of evaluation (placement, diagnosis, promotion, certification, providing feedback); Interrelationship between assessment and evaluation,
- Classification of Assessment based on: Purpose (Placement, Formative, Diagnostic,and Summative), Scope (Teacher-made, Standardized), Attributes Measured (Achievement, Attitude, Aptitude etc.), Nature of Information gathered (Qualitative, Quantitative), Mode of Response (Oral, Written and Performance), Nature of Interpretation (Norm-referenced and Criterion-referenced), and the Context (Internal, External).

  The terms to be explained in brief with suitable examples.
- Continuous and Comprehensive Assessment: Meaning, Importance and Scope; Learning and Assessment: Assessment of Learning, Assessment for Learning, and Assessment as Learning; CCA vs CCE,
- Assessment of Learning: Assessment at the end of learning experience; Processes of assessment of learning - testing, measurement, and non-testing methods of assessment – observation, interview, FGD,

Unit 2: Assessment for Learning

- Meaning, Importance and Purpose; Nature - formative, continuous with learning, comprehensive (assessing all aspects of learning-cognitive, affective and psychomotor), culturally responsive (elements from the local culture of the learners are extensively used in the assessment); relevance for CCA;
- Tools and Techniques: Wide range of formal (testing, observation schedules, video recordings etc.) and informal methods (participant observation, talking, taking notes, interviewing, engaging in activities etc.); use of testing (achievement tests of different forms, diagnostic tests, proficiency testes etc.) and non-testing (analysis of verbal and non-verbal activities, reflective journals, projects, portfolio etc.)tools; use of multiple methods and tools (situation specific combinations);

- Self and Peer-assessment techniques, Observation, Portfolio, interview, focused group discussion, rubrics;
  (Their description with examples and the context in which they are used)
- Provision of feedback for students and parents- need and modes, for teachers (for timely improvement of teaching-learning process); Role of community in CCA.

Unit 3. Construction of Test and Its Use

- Steps: Planning , Preparing, Trying-out and Evaluation;
  - 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); Assembling and editing the items
- Characteristics of a good test : Reliability, Validity, Usability (discussion on concept and use);
- Administration of the test and analysis of students' performance; Preparation of report and its use in enhancing learning.

Sessional Work:

Each prospective teacher educator is required to submit ***any one*** assignment from the following:

- 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 (carrying 25 marks), its administration and interpretation of the results.
- Preparation of a plan for CCA activities for any class during an academic session.
- Case study of a participatory assessment programme
- Appraisal of current CCA practices in the secondary schools.
- Analysis of examination marks obtained by the students in any subject in a class and preparation of a report for sharing.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

Anderson, L.W. (2003). *Classroom assessment: Enhancing the quality of teacher decision making*. Mahwah, New Jersey: Lawrence Erlbaum Associates.

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

Cooper**,**D. (2007). *Talk about assessment: Strategies and tools to improve learning*. Toronto,Ontario: Thomson Nelson.

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

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

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

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

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

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

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

Shepard, L.A.(2000). The role of assessment in learning culture. *Educational Researcher*, 4-14.

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

RTS-3: Inclusive Schooling

Semester-II	Credit-2
Marks 50 (Ext.35+Int.15)	Contact Hours-32

Objectives:

On completion of the course the prospective teacher-educator shall :

- *Explain the changing concepts related to inclusive education.*
- *Elaborate the different categories of children with special needs, their problems in schooling and need of inclusive education to address their educational problems.*
- *State the barriers of inclusion in the existing schools.*
- *State the characteristics and dimensions of an inclusive school.*
- *Describe the process of developing an inclusive school.*

Detailed Course Content:

Unit 1. Inclusive Education

- Changing concept of inclusion (Shifting from 'Segregation' to 'Integration' to 'Inclusion'); Inclusion as 'Education for all'.
- Inclusion in Education- a human right (Right to Access, Equality and Quality Education.
- Inclusive Education: Definition, rationale, characteristics and principles.

Unit 2. Children with Special Needs

- Types of marginalized /disabled children (physical, social and/or emotional) and their needs.
- Problems in schooling the CWSN: Physical, Cognitive, Emotional.
- Strategies for addressing their educational needs in inclusive set up: Specific attention to their needs in classroom management - seating arrangement, aids and appliances, light and ventilation, access to TLMs, mobility inside the class, interpersonal relation and support etc, Flexible curriculum, Flexible teaching-learning strategies - Child-centered, interactive, individual, group, collaborative and participatory classroom transaction.

Unit 3. Inclusive School

- Barriers for inclusion in school: Psycho-social, Infrastructural, Resource, Whole class-based instruction, Lack of participation.
- Concept, dimensions and features of an inclusive school.
- Developing an inclusive school: Creating inclusive cultures (building communities, establishing inclusive values), Producing inclusive policies (Developing the school for all, organizing support for diversity), and Evolving inclusive practices (Orchestrating learning, mobilizing resources).

Sessional Work

Each prospective teacher educator is required to submit ***any one*** assignment from the following:

- Observation of an inclusive classroom set up and reporting.
- Preparation of a report on classroom problems faced by any category of CWSN and the strategies adopted by the teacher.
- Preparation of a report on various types of interventions provided for any category of CWSN in school.
- Prepare a plan for any one school to develop it as an inclusive school.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings

Ainscow, M. (1999) *Understanding the development of inclusive schools.* London: Falmer.

Ainscow, M., Dyson,A. and Weiner, S. (2013). *From exclusion to inclusion: Ways of responding in schools to students with special educational needs*. Berkshire, London: CIBT Education Trust.

Booth, Tony and Ainscow, Mel (2002). *Index for inclusion: Developing learning and participation in schools.* London: Center for Studies on Inclusive Education.

Dyson, A. and Millward, A. (2000) *Schools and special needs: issues of innovation and inclusion*. London: Paul Chapman.

Hart, S., Dixon, A., Drummond, M.J. and McIntyre, D. (2004). *Learning without limits*. Maidenhead: Open University Press.

Nind, M., Sheehy, K. and Simmons, K. (eds). *Inclusive education: learners and learning contexts*. London: Fulton.

Thomas, G., & Loxley, A. (2007). *Deconstructing Special Education and Constructing Inclusion* (2nd Edn.). Maidenhead: Open University Press.

Tomasevski, K. (2004). *Manual on rights based education*. Bangkok: UNESCO.

UNESCO (1985). *Helping handicapped pupils in ordinary schools: Strategies for teacher training.*Paris: UNESCO.

UNESCO (1990). *World declaration on education for all and framework for action to meet basic learning needs.* International Consultative Forum on Education for All. Paris: UNESCO.

UNESCO (1994). *The Salamanca world conference on special needs education: Access and quality*. UNESCO and the Ministry of Education, Spain. Paris: UNESCO

UNESCO (1996). *Learning: the treasure within. report to UNESCO of the International Commission on Education for the Twenty-fi rst Century*. Paris: UNESCO.

UNESCO (1998). *Wasted opportunities: When schools fail. Education for all. Status and trends.* Paris: UNESCO.

UNESCO (1999). *From special needs education to education for all: A discussion document.* Tenth Steering Committee Meeting UNESCO, Paris 30 September - 1 October 1998.

UNESCO (1999) *Welcoming schools: Students with disabilities in regular schools.* Paris: UNESCO

UNESCO (2005). *Guidelines for inclusion: Ensuring access to education for all.* Paris: UNESCO.

United Nations (1989). *Convention on the rights of the child*. New York: United Nations.

RTS-4: ICT in Education

Semester-II	Credit-2
Marks 50 (Ext.35+Int.15)	Contact Hours-32

Objectives:

On completion of the course the prospective teacher-educator shall:

- *Appreciate the historical development of various educational media.*
- *Demonstrate understanding of the main components of the computer hardware in use.*
- *Use various digital technologies (hardware and software) for creating resources and enhance learning experiences for all types of learners (including differently-abled).*
- *Use various ICTs for project based/problem based constructivist learning environment.*
- *Explain the role of ICT in authentic and alternative assessment.*
- *Understand the social, economic, and ethical issues associated with the use of ICT.*

Detailed Course Content:

Unit 1: **Introduction to Information and Communication Technology**

- Information and Communication Technology: Evolution, meaning, nature and application in education.
- Hardware Fundamentals: Computer hardware fundamentals (anatomy, input devices, output devices, storage devices, display devices), types of computers and Computer Network; Use of digital camera, mobile, recorder, scanner, printer, interactive white board, visualizer, and multimedia projector for creating and using multimedia resources.
- Software Fundamentals: Software – Meaning and types; System software and Application software. Introduction to office applications (Word processing, Spreadsheet Presentations, Databases, Drawing tools, Multimedia tools, File formats and conversion, utility tools.

Unit 2: ICT and Pedagogy

- Approaches to integrating ICT in teaching and learning: Technological Pedagogical Content Knowledge (TPCK).
- Determine appropriate ICT and design a learning plan for a topic; Exploration of ICT resources for teaching learning.
- ICT for Pedagogical Innovations Development of e-content; Meaning, process and applications Web Quest and virtual field trips: Concept, process, and use in the classroom Open Educational Resources; Meaning and importance, various OER initiatives, Massive Open Online Course (MOOC), Flipped classrooms: Meaning and possibilities.
- Assistive technology for children with special needs: Tools and processes; Universal Design for Learning (UDL).
- Role of CIET/SIETs for Integrating ICT in Education; e-pathashala, NROER.

Unit 3: Use of ICT in Assessment and Management

- ICT and Assessment Electronic assessment portfolio - Concept and types; e-portfolio tools Creating and using electronic rubrics for assessment Online and offline assessment tools – Rubrics, survey tools, puzzle makers, test generators, reflective journal, question bank ICT applications for CCE.
- ICT and Management MIS systems for educational management ICT for personnel management: e-mail, task, events, diary, networking.
- ICT for educational management: 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.

Sessional Work:

Each prospective teacher-educator is required to submit ***any one*** assignment from the following:

- Preparation of a report on the use of ICT in teacher education programme.
- Preparation of a report on the interventions of educational technology in the current practices of teacher training programmes in India.
- Analysis of an educational telecast and preparation of a report
- Hands on experience on subject specific software tools like Geogebra, PhET, Stellarium, etc.
- Creating digital concept maps, flow charts, timelines for a particular content

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

Ahmad, J., Ahmad, M.S. and Khan, A. (2012). *Computer applications in education*. Hyderabad: Neelkamal Publication.

Bharihok, D. (2000). *Fundamentals of information technology*. New Delhi: Pentagon Press.

CEMCA (2010) . *Quality Assurance in multimedia learning materials (QAMLM).* New Delhi:Commonwealth Educational Media Center for Asia.

CEMCA (2014). *Professional development programme on OER-based e-Learning*. New Delhi: Commonwealth Educational Media Center for Asia, .

CEMCA (2014). *Technology tools for teachers*. New Delhi: Commonwealth Educational Media Center for Asia.

David, M. (2009). *Project based learning- Using information technology* (2nd Edn.). New Delhi: Viva Books.

James, K.L. (2003). *The internet: A user's guide*. New Delhi: Prentice Hall of India.

Kumar, Pradeep (2011). *Web resources in pedagogy*. Oakville: Apple Academics:

MHRD (2010). *National ICT @ Schools Scheme*. New Delhi: Department of School Education and Literacy, MHRD, Govt. of India.

MHRD(2012). *National Mission on Education through ICTs (NME-ICT)*. New Delhi: Department of Higher Education, MHRD, Govt. of India.

Mishra, S. (Ed.) (2009). *STRIDE Hand Book 08: E-learning*. New Delhi: IGNOU.

Mohanty, Laxman, & Vora,Neeharika (2008). *ICT strategies for schools- A guide for school administrators*. New Delhi: Sage Publications.

Mohit, K. (2003). *Design and implementation of Web-enabled teaching tools*. New Delhi: IRM Press.

NCERT (2013). *Information and communication technology for school system: Curricula for ICTs in education (students and Teachers),*(Version-1.2). New Delhi: CIET-NCERT, (www.ictcurriculum.gov.in).

NCERT (2013).*National Repository of Open Educational resources (NROER),* New Delhi: CIET-NCERT (nroer.gov.in).

Roblyer M.D., Doering, Aaron H. (2012). *Integrating educational technology into teaching* (6th Edition).

Semenov, Alexy (2005). *Information and communication technologies in schools. A handbook for ~~t~~eachers*. Paris: UNESCO.

UNESCO (2002). *Information and communication technologies in teacher education: A planning guide.* Paris: Division of Higher Education, UNESCO.

PSS-A P.2 : Pedagogy of Mathematics (Paper-2)

Semester-II	**Credit-4**
Marks 100 (Ext. 70+ Int.30)	**Contact Hours-64**

Objectives:

On completion of the course the prospective teacher-educator shall:

- *Understand the nature, scope and values of Mathematics, its place in Secondary School Curriculum, Contribution of Indian and other Mathematician.*
- *State the objective of teaching and learning Mathematics at the secondary and higher secondary school levels.*
- *Develop daily plan, long term and short term plans for teaching learning mathematics at the secondary and higher secondary school stage*
- *Understand different approaches and methods of teaching learning mathematics at secondary and higher secondary school level.*
- *Develop plans along with tools and techniques for conducting continuous and comprehensive assessment of students leaning Mathematics.*

Detailed Course Content:

Unit 1: Nature, Scope and Importance of Mathematics

- Nature and scope of Mathematics: Nature of Mathematics – Abstract, symbolic, generalized, preciseness and brevity; mathematical proof, structure and logic; Value of Mathematics: Cultural, Disciplinary, Moral, Social, and Utilitarian values.
- Structure of Mathematics: Meaning of undefined terms, defined terms, definitions, axioms, theorems, propositions – truth values, truth table, open sentences, logically valid conclusions, use of quantifies, implication, necessary and sufficient conditions, a mathematical statement and its variants – converse, inverse and contra-positive, compound propositions; Types of Proofs- Direct proofs, Indirect proofs, Proof by Contradiction, Proof by Exhaustion, Proof by Mathematical Induction
- Place of Mathematics in Secondary School Curriculum, Correlation of Mathematics with other Subjects.

Unit 2: Objectives of Teaching and Learning Mathematics at Secondary & Higher Secondary Levels

- Importance of aims/goals of Mathematics
- Objectives of Teaching Mathematics at secondary and higher secondary level.
- General and Specific learning objectives as per Bloom's taxonomy with Anderson's revision.
- Objectives of teaching-learning school Mathematics, like Algebra, Geometry, Mensuration, Trigonometry, Statistics, Probability and Calculus etc.

Unit 3: Planning Teaching – Learning of Mathematics

- Content categories in Mathematics: Facts, Concepts, Illustrations, Generalizations etc.and their horizontal and vertical linkages.
- Content analysis in Mathematics: Concepts mapping in Mathematics taking sample contents from Algebra, Geometry, Trigonometry (9^{th} to 12^{th}standard) with pedagogical analysis.
- Designing of learning experiences in Mathematics: Projects, Portfolios, Reflective Journals, Activities; Recreational aspect of mathematics- mathematical games, puzzles and amusements; Computer aided learning and Computer based instructions; Mathematics Laboratory and Mathematics
- Developing Annual plan, Unit plan, and Lesson plan in mathematics elaborating specific steps of each plan for classes at the secondary and higher secondary school levels. Developing lesson plans using 5E and ICON models.

Unit 4: Assessing Learning in Mathematics

- Assessment *of* Mathematics learning: Unit test – Designing blue print and preparation of achievement test.
- Assessment *for* Mathematics learning: Test / Assignment, Projects, Portfolios in Mathematics, group and collaborative assessment in Mathematics. Assessment *as* learning Mathematics: Self-assessment, Rubrics, Activities etc.
- Non - testing methods of assessment of / for mathematics learning; observation of learner in action, rating of participation in various Mathematical task and activities.
- Planning for continuous assessment of classroom learning in Mathematics.

Sessional Work

Each prospective teacher-educator is required to submit ***any two*** assignments from the following:

- Preparation of a report about contributions of Indian Mathematicians.
- Analysis of Mathematics textbooks (from class IX to class XII) to identify various categories of Mathematical knowledge, its horizontal and vertical linkages.
- Preparation of concept map on any topic of secondary/higher secondary school Mathematics
- Writing specific learning objectives.
- Preparation of unit plan and lesson plan on selected unit and selected topic respectively from secondary level using 5E and ICON models.
- Development of learning activity on different topics of school mathematics (at least two on any topics of mathematics)
- Analysis of errors committed by learners in Mathematics in class tests and their causes.
- Reflective paper on any problem of teaching and learning mathematics in a socio – cultural context.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

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.

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 teacher.* 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 of mathematics*. Hyderabad: Neel Kamal Publications.

John Stillwell (1989). *Mathematics and its history – Undergraduate text in mathematics*. New York: Springer – Verlag.

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

Lgewiez, Boris and Stoyle, Judith (1973). *An introduction to mathematics reasoning*. New Delhi.

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

NCERT (2006). *Position paper: National Focus Group on Teaching of Mathematics.* New Delhi.

NCERT (2012). *Pedagogy of mathematics: Textbook for two year B. Ed. Course*. New Delhi.

Polya George (1957). *How to solve it*. Garden City New York: Doubleday.

Robert B Davis (1984). *Learning mathematics – The cognitive approach to mathematics education.* Sydney: Croom Helm Australia Pvt. Ltd.

Servais, W. and Varga,T. (1971). *Teaching school mathematics*: A *UNCESCO source book.* Paris: UNESCO.

Somashekar,T.V.,Viswanathappa,G. and James, Anice (2014). *Methods of teaching mathematics.* Hyderabad: Neelkamal Publications.

PSS-A P.2 : Pedagogy of First Language-Odia (Paper-2)

Semester-II	Credit-4
Marks 100 (Ext. 70+ Int.30)	Contact Hours-64

Objectives:

On completion of the course the prospective teacher-educator shall:

- *Understand the different roles of language;*
- *Understand the use of language in context such as grammar and vocabulary;*
- *Identify methods, approaches and materials for teaching Odia at various levels of school education*
- *Develop activities and tasks for learners including audio-video materials, ICT and Internet;*
- *Understand the process of language assessment.*

Detailed Course Content:

Unit 1: Language and Linguistic Behavior

- Importance, nature and functions of language
- Language as a system: symbols and levels (substance, forms and context) of language
- Linguistic structure and aspects of Odia language – phonological, morphological, syntactic and semantic.
- Linguistic behaviour with reference to language skills – types (receptive Vs. productive; input vs. output) and their independence and interdependence
- Literary devices in Odia: Alankara, Chhanda and Raga

Unit 2: Place and Manner of Articulation in Odia Language

- Sounds of Odia language: Vowels, Diphthongs and Consonants
- Organs of speech: Their role in articulation of Odia sounds.
- Stress: Meaning, pattern, form and principles.
- Intonation: Meaning and types
- Problems of articulation in Odia language in regional context of Odisha: Nature, causes and remediation.

Unit 3: Learning Resources for Teaching-Learning Odia Language

- Developing local specific teaching learning materials& ICT based instructional material
- Innovative practices: Online language learning resources- access and use of ICT; Use of language laboratory for promoting language proficiency.
- Promoting functional competency in Odia language: Organizing language and literary activities (composing and reciting poems, writing short stories/paragraphs, framing and exchanging dialogues, vocabulary quiz etc)
- Using Key Learning Resources for effective classroom transaction in learning Odia language

Unit 4. Assessing Learning in Odia Language

- Facilitating learning through assessment during teaching-learning: Use of formative assessment (peer interaction, debate, reflective practices, relating learning to real life situation etc) for improving learning (diagnosis of language difficulties and improvement)

- Assessing language skills: strategies –oral & written; peer and group assessment; assessment within and beyond class room.
- Framing objective - based test items: extended response type, restricted response type and objective type test items relating to assessment of different language skills
- Constructivist approach to assessment: Rubric, Portfolio, Reflective Journal & Open ended test items.

Sessional Work:

Each prospective teacher-educator is required to submit ***any two*** assignments from the following:

- Prepare a comparative study of one textbook of Odia from any class (VI to VIII).
- Identify and prepare different types of teaching aids in language (Odia)for children with special needs.
- Analyze the question papers of Odia language (Previous-3 years) — classes X &XII (any board) in the light of new approach of assessment.
- Develop a question paper for upper primary and secondary stage to assess all the aspects of language learning.
- Devise a strategy to incorporate the suggestions given in the Ist CCE report for the progress of the learner
- Select any ten questions from the class VI Language (Odia) textbook which test the creativity of the learners.
- Prepare an outline for a school magazine.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course

Suggested Readings:

Brumfit. C (1984). *Communicative methods in language teaching*. Cambridge: Cambridge University Press.

NCERT (2015). *Continuous comprehensive evaluation: Exemplar package for upper primary stage in language.* New Delhi: National Council of Educational Research and Training,

NCERT (2005). *National curriculum framework 2005.* New Delhi: National Council of Educational Research and Training.

NCERT (2006). *Position paper: National focus group on teaching of Indian languages.* New Delhi: National Council of Educational Research and Training.

Nayak,B. and Mohanty,J. ( ). Odia Bhasa O Sahityara Bhittibhumi O Shikshadan Paddhati Pattnaik,D.P.Mother tongue and Destiny

Pattnaik,D.P. OdiyaBhasa O Bhasa Bigyan

Mohapatra,B.P.Matrubhasa Odiya , NCERT, 2006.

S.K.Kochhar (1990).Teaching of Mother Tongue,Sterlinhg ,New Delhi Ryburn,W.M.Teaching of Mother Tongue,Falmer Press Palmer,

Tess India (2014). *Key Resources*. *www.TESSIndia.edu.in*

PSS-A P.2 : Pedagogy of Language-English (Paper-2)

Semester-II	Credit-4
Marks 100 (Ext. 70+ Int.30)	Contact Hours-64

Objectives:

On completion of the course the prospective teacher-educator shall:

- *Understand the different roles of language.*
- *Understand the use of language in context such as grammar and vocabulary.*
- *Identify methods, approaches and materials for teaching English at various levels in the Indian context.*
- *Develop activities and tasks for learners including audio-video materials, ICT and Internet.*
- *Understand the process of language assessment.*

Detailed Course Content:

Unit I: Language and Linguistic Behaviour

- Importance, nature and functions of language
- Language as a system: symbols and levels (substance, forms and context) of language
- Linguistic structure and aspects of English language – phonological, morphological, syntactic and semantic.
- Linguistic behaviour with reference to language skills – types (receptive Vs. productive; input vs. output) and their independence and interdependence
- Literary devices: Simile, Metaphor, Image, Alliteration, Assonance and Rhyme

Unit 2: Place and Manner of Articulation in English Language

- Sounds of English language: Vowels, Diphthongs and Consonants
- 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.

Unit 3: Learning Resources for Teaching-Learning English

- Developing local specific teaching learning materials& ICT based instructional material
- Innovative practices: Online language learning resources- access and use of ICT; Use of language laboratory for promoting language proficiency.
- Formation of language clubs: organizing various activities for promoting functional competency in English language.
- Using Key Learning Resources for effective classroom transaction in learning Odia language

Unit 4: Assessing Learning in English

- Facilitating learning through assessment during teaching-learning: Use of formative assessment (peer interaction, debate, reflective practices, relating learning to real life situation etc) for improving learning (diagnosis of learning difficulties and improvement)

- Assessing language skills: strategies –oral & written; peer and group assessment; assessment within and beyond class room.
- Framing objective - based test items: extended response type, restricted response type and objective type test items relating to assessment of different language skills
- Constructivist approach to assessment: Rubric, Portfolio, Reflective Journal & Open ended test items.

Suggested Activities:

Each prospective teacher-educator is required to submit ***any two*** assignments from the following:

- Prepare a comparative study of one textbook of English from any class (VI to VIII).
- Identify and prepare different types of teaching aids in language (English)for children with special needs.
- Analyze the question papers of English language (Previous-3 years) — classes X &XII (any board) in the light of new approach of assessment.
- Develop a question paper for upper primary and secondary stage to assess all the aspects of language learning.
- Select any ten questions from the class VI English textbook which test creativity of the learners.
- Devise a strategy to incorporate the suggestions given in the Ist CCE report for the progress of the learner.
- Prepare an outline for a school magazine.
- Identify and list Language (English) related errors common among students.

Note: Project work, Students Teacher's Portfolio, Activities, Presentations, Workshops and Educational tours to be carried out during both the years. (Every student has to prepare her/his own portfolio and four projects are compulsory for each semester.)

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course

Suggested Readings:

Agnihotri, R.K., Khanna, A.L.(Eds.) (1994). *Second Language Acquisition: Sociocultural 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.

Brumfit. C (1984); Communicative methods in Language Teaching; Cambridge University press: Cambridge.

Chomsky, Noam (1964) in Day. E. M (2002): Identity and the young English language learner; Multilingual Matters Limited; London.

Cummins, J. and Swain, M. (1986). *Bilingualism in education*. London: Longman.

Ellis, R. (1985). *Understanding second language acquisition*. Oxford: Oxford University Press.

Gardner and Lambert (1972) Attitudes and Motivation in second language learning; Rowley; Newbury house.

Harme, Jeremy(1998). Longman handbooks for language teachers: The practice of English language teaching.

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*. New Delhi, National Book Trust of India.
NCERT (2005). *National Curriculum Framework 2005*. NCERT,
NCERT (2006). Position Paper, National Focus Group on Teaching of English; NCERT.
NCERT (2006). Position Paper, National Focus Group on Teaching of Indian languages, NCERT.
NCERT(2008). Source Book on Assessment for Classed I-V, Language English. NCERT.
NCERT(2015). *Continuous Comprehensive Evaluation – Exemplar Package for Upper Primary Stage in English*. New Delhi National Council of Educational Research and Training.
NCERT(2015). *Learning indicators till the elementary stage*. New Delhi: National Council of Educational Research and Training.
Prabhu, N.S. (1987). *Second language pedagogy*. New York: Oxford University Press.
Srijan1, Creative Writing and Translation, National Council of Educational Research and Training, New Delhi 2010.
Tess India (2014). *Key Resources*. *www.TESSIndia.edu.in*
The Right of Children to Free and Compulsory Education Act-2009, The Gazette of India, 2009.

PSS-A P.2 : Pedagogy of Biological Science (Paper-2)

Semester-II	**Credit-4**
Marks 100 (Ext. 70+ Int.30)	**Contact Hours-64**

Objectives:

On completion of the course the prospective teacher-educator shall:

- *Develop understanding about linkage among different concepts and themes in Biological sciences and also with real world/ life.*
- *Explore different ways to create learning situations for different concepts of Biological sciences for learners of different abilities*
- *Effectively use different activities and laboratory experiments for facilitating learning of Biological sciences*
- *Develop appropriate assessment tools for the evaluation of learning of different concepts of Biological sciences*
- *Examine different issues in Biological science and well as in pedagogical processes.*

Detailed Course Content:

Unit 1: Learning Assessment in Biological Science

- Learning indicators in Biological sciences and assessment of these learning indicators in the form of learning evidences/ outcome in classroom and laboratory
- Construction of classroom tests and unit test.
- Alternative strategies for assessment like 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 2: Pedagogical Treatments in Biology

- Pedagogical approaches: Behaviourist and Constructivist;

- Strategies/Approaches: Problem solving, experimentation, project-based, cognitive conflict;
- Content Analysis of Biological Science: Identification of major concepts, themes, criteria for assessment in respect of major concepts in school Biology content - Cell and its organization - Plant and animal kingdom - Environment and its protection - Principles of evolution - Principles of Genetics and heredity

Unit 3: Issues and Challenges in Biological Science

- Development of Process skills
- Language of Bio Science
- Ethical aspects of Bio-Science
- Innovations and Research in Bio-Science

Unit 4: Continuing Professional Development of Biology Teacher

- 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
- Collaboration with different schools, institutions of higher education and research in the field of Biology
- Exploration of ICT based online platforms for sharing the ideas, methods, strategies and teaching learning resources.
- Role of reflective practices continuing professional development

Suggested Activities:

Each prospective teacher-educator is required to submit ***any two*** assignments from the following:

- Develop rubric for assessment of performance of any one unit of Bio-Science at secondary class
- Construction of unit tests for assessment of any two units in Bio-Science at secondary level.
- Content Analysis of any one area/chapter of Biological Science of a particular class
- Develop strategy for continuing professional development of Bio-Science teachers of secondary school

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Reading:

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

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).

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.

Vaidya, N. (1999). Science teaching for 21st Century. Deep & Deep Publication.

RTS Pr.-3: Communication and Expository Writing

Semester-II	Credit-2
Marks 50 (Internal 50)	Contact Hours-64

Rationale:

This course is designed to enable the prospective teacher educators / teachers improve their communication skills in respect of listening and receiving, speaking and interacting, presenting as well as explaining ideas / thoughts while interacting with groups / audience, reading with proper decoding and comprehending the material and appropriately communicating thoughts and emotions in the form of effective writing. The overall purpose of the course is to enrich a candidate with the know-how of communication expertise for professional excellence

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Objectives:

On completion of this course, the prospective teacher educator shall:

- *Exhibit the characteristics of a good listener receiving the intention of a speaker appropriately*
- *Interact with the clients judiciously and meaningfully*
- *speak out the thoughts and ideas with clarity for the receivers*
- *decode appropriately and comprehend the ideas / thoughts in a text / reading materials*
- *express thoughts / ideas appropriately with clarity, brevity, sequence and correctness in written form*
- *exhibit an overall mastery of all the language skills for professional requirements*

Mode of Transaction

This course shall be transacted through different activities related to the language skills – the activities ought to be primarily group activities through participatory approach. Active participation can only promote facilitation of language skills. So various task-based activities need to take place

and the theoretical base of communication can be presented simultaneously along with demonstration, discussion and practice.

Proposed Activities:

I. Exposure to listening materials

- Authentic listening: recorded speech, audio cassettes, video, telecast speech and programmes, seminar address, receiving and preparation of note;
- listening to a group discussions as an observer and note taking; listening to different languages useful in life and profession (Odia, Hindi, English, dialects of Odia, tribal languages)
- understanding and practicing pronunciation, stress, intonation and pause,
- pair-work in listening activities, intensive listening to live recording of public talk in crowded places (bus stand, railway station, airport, market place) and understanding the gist;
- preparing listening materials (academic / non-academic) for different categories of clients; developing programmes for listening exercise, listening and note taking.

II. Speaking Activities and Exercises

- Taking part in peer / group conversation: active participation in group discussion on various themes (educational issues, socio-political issues, cultural topics, national and international issues / concerns, environment related issues etc); conduct of Mock Parliament, Mock Interview, Public address / speech, anchoring a programme, conduct of Quiz;
- listening to own recorded speech for identification of speech deficiencies and remediation; designing a programme of action for speech improvement; developing dialogue for practice, conducting debate / symposium on selected themes, preparing a speech on a theme of national / international importance and its deliberation, panel discussion.

III. Reading Activities

- Reading of a text / newspaper / magazine for scanning and skimming information, interpreting editorial from newspaper and research articles for in-depth analysis (reading beyond), reading of E-books and online journals and summarizing, readings of subject related reference books and note making, collaborative reading and group discussion for multiple interpretation

IV. Reading-writing Connection and Expository Writing

- critical reflection on a theme / text and writing a reflective note,
- brainstorming on pertinent issues and preparing a write-up on the discussion,
- prepare a book / film review, appraisal of textbook / syllabus,
- workshop for writing – developing the process of writing: drafting (gathering / generating ideas, sequencing, language, presentation / style) revising for improvement and modification, finalizing; writing letters (formal and informal), official notes / comments;
- preparing explanatory notes on texts;
- personal and descriptive writing on topics / themes;
- preparation of a reflective write up on a theme / topic of academic significance

Apart from the suggested activities under the different language skills, other activities can be selected by institutions/departments as per their suitability and convenience. However, at least three activities of each skill should be taken up.

Assignments:

Each prospective teacher-educator is required to submit ***any two*** assignments from the following:

(The two assignments need to be selected in such a way that the four skills of language communications are adequately included)

- Preparing a report on peer communication (observing and recording their communication characteristics)
- Preparing a case study of a communication problem of any elementary / secondary school teacher and developing an improvement plan
- Preparation of a talk / speech on a given topic and delivery of the same
- Analysis of a text from any subject from the communication skill point of view to be presented in a classroom
- Preparation of an action plan on development of any two language skills for the students / teachers
- Identification of problem in any two language skills of the students / teachers and developing a remediation programme

(***The institute can include further assignments)***

Mode of Assessment:

Area	Aspects	Marks
Listening	Exposure to Listening	08
Speaking	Speaking Activities & Exercises	08
Reading & Writing	Reading Activities	06
	Reading-writing Connection and Expository Writing	08
Assignments (2 nos.)		10+10 = 20
TOTAL		**50**

PSS Pr.-II:

SI-II : Exposure to Multi-cultural Contexts in Schools

Semester-II	Credit-4
Marks 100 (Internal)	**4 weeks**

Rationale:

Prospective teacher educators need to experience the variety of school contexts and functioning to enrich themselves for meeting the professional needs of the regular teachers. A comprehensive understanding of various school contexts shall enable them to develop a rational approach in their profession.

Objectives:

On completion of this programme the prospective teacher-educators shall:

- *Experience the multi-cultural dimensions in and across the different schools (Government – Non-Government, Rural – Urban, Tribal – Non-tribal, Co-education – Girls, English – Odia medium) in respect of availability of*

physical infrastructure, human resource (academic and non-academic), curriculum transaction process, teaching-learning resources.

- *Prepare a report on the experiences gained in the aforesaid aspects in comparative perspectives.*
- *Envision a functional school for facilitating an all-round development of the learners and quality learning in terms of :*

-designing appropriate classroom arrangement
-developing meaningful teaching-learning strategies
-identifying effective teaching-learning resources
-organizing other curricular and support activities
-drawing a realistic plan and programme for institutional development
-preparing annual calendar of activities for the institution

- *Use the experiences for growth of professional competency and excellence*

Activities to be performed:

Each prospective teacher educator shall perform the activities as detailed below and shall prepare a report which shall be assessed internally by a committee of faculty members. The tentative distribution of marks is given below:

Sl. No.	**Activities**	**Marks**
1	Visiting different types of school, observing availability of physical and instructional resources and preparing a report	10
2	Observing classroom learning situations of the regular teachers (at least 10 lesson in his/her method subject) and reporting on the transaction process as per the Observation Schedule (*schedule to be developed by the respective institution/department*)	20
3	Observing and reporting on the other curricular activities organized in the schools	10
4	Observing the activities of the visited schools on a particular day as per their routine and preparing a report	10
5	Taking arrangement classes as assigned (at least 05) and reporting experiences	10
6	Identifying a case (problem child, underachiever, irregular attenders etc.) and preparing a case study report	20
7	Observing staff relation (teacher – teacher; teacher – headmaster, headmaster / teacher – other support staff) and preparing a report	10
8	Preparing a report on the process of the learner-evaluation and opinion of the teachers and Headmasters	10
TOTAL		**100**

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THIRD SEMESTER

PC-1: Introduction to Study of Education

Semester-III	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours-64

Objectives:

On completion of the course, the prospective teacher educator shall:

- *Explain how education is an inter-disciplinary subject*
- *Analyse the discipline of education as an important sub-system of overall social-system*
- *Visualize the role of education in the changing socio-cultural contexts*
- *Suggest ways to address the challenges of school education*
- *State the use of various support systems for improving school education*

Detailed Course Content:

Unit 1: Understanding Education

- Meaning of Education: Derivational, Broad and Narrow, Eastern and Western views; Education as process: Bipolar, Tri-polar, Multi-polar, Lifelong; Agency - Formal/ Institutional, Informal/ Incidental and Non-Formal.
- Education as a Discipline: Attributes of a discipline (a community of person, an expression of human imagination, a domain, a mode of inquiry, a conceptual structure, a specified language, a heritage of literature, a network of communication, an evaluative and affective stance and an instructive community);
- Importance of education as a discipline; Inter-disciplinary and Multi-disciplinary nature of education; Its relationship with other allied disciplines like philosophy, sociology, Psychology, Political science, History, economics, anthropology etc.
- Aims of education: Determinants – philosophical, socio- cultural, political, economical, psychological; Individual and Social Aims; Aims according to Secondary Education Commission (1952-53), Education Commission (1964-66), NPE (1986), International Commissions on Education (Learning to Be & Learning the Treasure Within).

Unit 2: Education and Knowledge

- Knowledge : Concept, characteristics and types
- Knowledge generation : Meaning, process and strategies
- Role of education in knowledge generation by linking:
    - School knowledge with life outside
    - Content knowledge with pedagogy knowledge
    - Knowledge on action with knowledge on reflection and outcome
    - Experiential knowledge with empirical knowledge
    - Theoretical knowledge with practical knowledge
    - School Knowledge with community knowledge
    - Universal knowledge with contextual knowledge

Unit 3: Education and Society

- Society as a system: Attributes of a system; Importance of society as a system - Meaning, Structure (Groups, Norms, Values), Functions (Adaptation, Goal attainment, Integration, Patent pattern maintenance); Subsystems of society and their interrelationship.
- Importance of Education as a sub-system: Its components and relationship with other sub-systems; Education as a system: Levels - Elementary, Secondary, Higher Secondary and Higher Education and their interlinkages.
- Social institutions: Educational, Economic, Political, Religious and Family; School as a social institution and formal agency of education- Purpose , Functions (Conservation and Progressive), Stake holders' roles.
- School Activities: Curricular and other curricular-Components, Mode of planning and organization; Resource requirements- Material, Infrastructural, human and technological with reference to their sources and utilization.
- School-community inter-face: Importance, Aspects of inter-face strategies for strengthening their inter-relationship; their roles in building learning communities.

Unit 4: Education in Changing Contexts

- Understanding emerging contexts in Indian society with reference to linguistic, cultural and ethnic diversities, globalization, privatization, liberalization and digitization.
- Imperatives of Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs).
- Concern for equity and equality in education: Challenges of marginalization and gender disparity.
- Transformation agenda for school and teacher education as envisioned in NPE - 86, NCF - 2005 and NCFTE - 2009 and NCTE Regulation 2014.

Sessional Work:

The prospective teacher-educator shall undertake ***any two*** assignments of the following:

- Preparation of a write-up comparing the aims of education as proposed by different national and international commissions and committees.
- Prepare a report on an interview made with an NGO engaged in education activities, preferably on school –community interface activities
- Observation of different activities in schools of urban and rural areas and prepare a report of similar and peculiar activities (both social and educational) highlighting their educational significance.
- Preparation of a paper for seminar presentation on issues of equality and equity in the context of universalization of elementary education in Indian context : Role of school and community.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course

Suggested Readings:

Beyer. L.E. (Ed), (1966) *Creating Democratic Classroom: The Struggle to integrate theory and Practice*, New York, Teachers College Press.

Broudy, H.S. (1977), *Types of Knowledge and Purpose of education*, In R.C. Anderson, R.J.,

Bruner, J.S. (1966), *The Culture of Education*, Cambridge, M.A., Harward University Press

Butchvarov, P. (1970), The concept of Knowledge, Evanston, illions, North Western University Press.

Dearden R.F. (1984). *Theory and practice in Education*. Routledge K Kegan & Paul.

Debra Heyes, Martin hills, Pam Chistie and Bob Lingard (2007). *Teachers and schooling: Making a difference,* Allen and Unwin, Australia

Delors, Jaques et al. (1996). *Learning: The treasure within – Report to UNESCO of the International Commission on Education for the Twenty-first Century*. Paris: UNESCO.

Freire, Paulo (1970). *Pedagogy of the oppressed*. New York. Continuum

Friere, P. and Shor, I. (1987*). A pedagogy of liberation*. London. Macmillan Education.

MHRD, (1992), *Programe of action*, Govt. of India, New Delhi.

MHRD, Govt. of India (1992), *National policy on education* (revised), New Delhi.

Naik, J.P. (1975) Equality, quality and quantity: The elusive triangle of Indian Education, allied Publications, Bombay

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

NCTE (2009) National Curriculum Framework for Teacher Education, New Delhi.

Peters, R.S. (1967), The concept of education, Routledge, United Kingdom.

Peters, R.S. (ed), (1975). *The Philosophy of Educatiopn*, Oxford University Press, London.

Russell, Bertrand (1932/1967). *Education and the social order*. London: Unwin Books.

Slatterry, Patrick and Dana Rapp. (2002). *Ethics and the Foundations of education- Teaching Convictions in a postmodern world*. Allyn & Bacon

Spiro, W.E. Montanaque (eds) Schooling and acquisition of knowledge (PP. Hillsdale, NJ Erlbaum)

Wall, Edmund (2001). *Educational Theory: philosophical and political perspectives*. Prometheus Books

Winch, C. (1986). *Philosophy of human learning*. London: Routledge.

Winch. C. (1st Edn). (1996). *Key Concepts in the philosophy*

PC-9: Language Across Curriculum

Semester-III	Credit-2
Marks 50 (Ext.35+Int.15)	Contact Hours-32

Objectives:

On completion of the course, the prospective teacher educator shall:

- *Identify the language backgrounds of students and facilitate their movement from home / regional language to standard language.*
- *Analyze the nature of classroom discourse and devise strategies to improve communication skills of students.*
- *Develop the appropriate skills of reading and writing among the learners and facilitate reading writing connection.*
- *Envision their role as facilitators of learners' language enrichment irrespective of the subjects they teach.*

Detailed Course Content

Unit 1: Language Background of Learners

- Varied language contexts of the learners – dialect, regional varieties and standard language; significance of first language in learning
- Home language Vs. School Language – Transmission and movement: challenges and strategies
- Understanding multilingual context -Challenges and strategies

Unit 2: Language in Classroom

- Nature of classroom discourse and significance of language
- Communication skills - promotion of oral skills through questions, discussion, sharing and interaction
- Language across various disciplines and subjects – humanities and science; Role of language in ensuring optimum learning in subject areas

Unit 3: Reading-Writing Connection

- Reading in different content areas for information and data gathering, critical understanding; Strategies for developing reading skills such as scanning, skimming, in-depth reading, note making
- Reading-writing connection in different content areas – Use of note making for preparing a write-up, use of information gathering for summarizing,
- Writing for various purposes - preparing report, writing paragraph, explanatory notes, expansion of ideas, presenting information in various forms such as flow-chart, diagram, pie-chart, histogram
- Process writing - generating / gathering ideas, drafting, revising and finalizing

Sessional Work:

Each student-teacher is required to submit assignment on ***any one*** of the following:

- Preparation of a report on language diversities of learners in a secondary grade with strategies to address the challenges.

- Devising an action plan for developing the components (sub-skills) of reading / writing skill of the learners at the secondary level
- Expansion of an idea / ideas from the secondary level texts and presentation of the same in the form of flow-chart / pie-chart / tree diagram

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course

Suggested Readings

Daniel, Larsen–Freeman (2010). *Techniques and principles of language teaching (2nd Edn.).* Landon: Oxford University Press.

Kumar, Krishna (2008). *The child's language and the teacher – A handbook*. New Delhi: National Book Trust.

Lightbown, P.M. and Spada, N. (1999). How languages are learned. Oxford: Oxford University Press.

RTS-1: Introduction to Research Methods

Semester-III	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours-64

Objectives:

On completion of the course the prospective teacher educator shall:

- *Clarify the conceptual issues related to educational research*
- *State the scope of Educational Research.*
- *Explain the knowledge generation process in historical perspective.*
- *Understand and explain the variety of research approaches.*
- *Understand the relevance of different approaches.*
- *Understand the variety of research methods - Design, sample, tools and data analysis techniques).*
- *Prepare a research proposal.*
- *Understand the application of statistics.*

Detailed Course Content:

Unit 1: Research in Education: Conceptual Issues

- *Educational Research*: Meaning, purpose and areas; Classification by purpose : Basic, Applied and Action Research - their characteristics.
- *Research paradigm in education*: Quantitative, Qualitative and Mixed – their characteristics.
- *Quantitative Approaches*: Survey, Correlational, Causal-Comparative, Experimental, Single-Subject research.
- *Qualitative Approaches*: Case Study, Ethnography, Phenomenological, Grounded Theory, Hermeneutic, Historical and Narrative.
  (*Fundamental characteristics of the approaches to be dealt at this stage*)

Unit 2: Research Problem, Sampling and Tools

- *Identification of Research Problem*: Criteria, and sources; Review of related literature; Problem specification - Formulation of objectives and hypotheses; Types of Hypothesis- Null and Directional or Alternative Hypothesis.
- *Sampling*: Population and Sample; Sampling Techniques for Qualitative Research (Theoretical sampling, critical case sampling, incidental sampling and sensitive case sampling) and Quantitative Research (Probability Sampling, Simple Random Sampling, Stratified Random Sampling, Systematic Sampling, Multi-Stage Sampling) and Non-Probability Sampling (Cluster Sampling, Incidental Sampling, Purposive Sampling, Judgmental Sampling, Snowball Sampling, etc.); Adequacy and Representativeness of a sample; Measures of sampling error and sampling distribution of a measure.
- *Tools and Techniques of Research*: Interview- structured and unstructured; Observation– participant and non-participant; Questionnaire and Opinionnaire; Rating scale and Checklist; Tests- Teacher-made and Standardized, Socio-metric techniques, Projective techniques, Focused Group Discussion, Reflective Dialogue, Anecdotal records, Portfolios and Rubrics.

  (*Discussion of the tools and techniques shall be made on their development, uses and limitations*)
- *Characteristics of the tools*: reliability, validity and usability.

Unit 3: Designing a Research Proposal

- Conceptual framework, Need and Importance; Components of a Research Proposal
- Introduction: Rationale emerging from the review of related literature, Emerging Research Title, Specification of the statement of the title
- Research questions, Objectives, Hypotheses, Operational definitions of the key terms to be used, Delimitations (as contrast to limitations).
- Method of Study
  - Study approach/design
  - Population and Sample
  - Instrumentation - Tools and techniques
  - Procedures: For data collection and data analysis
- Expected Outcomes of the Study/Emerging Theses
- Time Schedule and Financial Requirements.

Unit-4: Basic Descriptive Statistical Treatment for Data Analysis

- Basic concepts: Scales of Measurement - Ordinal, Nominal, Interval and Ratio; Measures of Central tendencies and Variability; Percentiles and Percentile Ranks; Standard Score
- Probability: Normal Probability Curve and its Properties, Deviation from normality and underlying causes
- Correlation: Concept, Computation and Interpretation of Linear correlation, Product Moment Correlation, Rank Correlation, Biserial Correlation, Point Biserial Correlation, Tetrachoric, Phi Correlation and coefficient of contingency, Coefficients of Determination and Alienation.
- Concept of Multiple and Partial Correlation, Linear Regression (Bivariate only).

Sessional Work:

Every prospective teacher-educator shall undertake ***any two*** assignments of the following:

- Develop a research proposal for investigation of any educational problem
- Critical analysis of any standardized research tool based on its preparation and validation
- Preparation of frequency distribution, plotting of various graphs, calculation of various measures of central tendency and variability, and computation of skewness and kurtosis on a given set of data.
- Computation of various parametric and non-parametric statistics on a given set of data
- Develop a trend report based on the review of literature on any educational issue.
- Application of various analysis techniques on the given qualitative data
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The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course

Suggested Readings:

Cohen, L., Lawrence, M. and Keith, M. (2007). *Research methods in education* (4th Edn.). London: Routledge Kegan Paul.

Creswell, John W. (2007). *Qualitative inquiry and research design: Choosing among five approaches*. New Delhi: Sage Publication.

Creswell, John W.(2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (4th Edn.). London: Pearson Education.

Ferguson, G.A. and Takane,Y.(1989). *Statistical analysis in psychology and education* (6th Edn.). New York: McGraw Hill.

Gay,L.R., Mills, G.E., and Airasian, P.W. (2014). *Educational research: Competencies for analysis and application* (10th Edn.). London: Pearson Education.

Glass, G.V. and Stanley, J.C. (1970). *Statistical methods in education and psychology*. Englewood Cliffs, New Jersey: Prentice Hall.

Graziano , M and Raulin, Michalel (1980). *Research methods, A process of inquiry*. New York: Harper and Row.

Keeves, John. P (Ed.) (1990). *Educational research methodology and measurement: An international handbook*. New York: Pergamon Press.

Kerlinger, F.N., and Lee, H.B. (2000). *Foundations of behavioral research* (4th.Edn.). New York: Wadsworth/Thomson Learning.

Lovell, K and Lawson, K.S. (1970). *Understanding research in education*. London : University of London.

Tuckman,B.W.(1972). *Conducting fundamental research*. New York:Harcourt Brace Javonovich Inc.

Van Dalen, D.B. and Meyer, W.J. (1979). Understanding educational research. An introduction. New York: McGraw Hill

PSS-B P.1 : Pedagogy of Social Science (Paper-1)

Semester-III	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours-64

Objectives:

On completion of the course the prospective teacher educator shall:

- *Develop understanding of the nature of environmental science at primary level and social science at Upper Primary Level as integrated area of study.*
- *Identify, prepare and collect different teaching-learning resource materials.*
- *Use the teaching-learning resources effectively in the classroom.*
- *Examine the prevailing pedagogical practices in classroom which facilitate learning.*
- *Acquire basic knowledge and skill to analyse and transact the curriculum effectively following wide ranging teaching – learning strategies.*
- *Make pedagogical analysis of the concepts in both the curricula.*
- *Develop lesson plans by integrating it with life situations for effective teaching learning.*

Detailed Course Content:

Unit 1: Environmental Studies and Science at the Elementary Level

- Concept and importance of Environmental Studies at Primary Level; Environmental Studies as an integration of Science and Social Studies; Significance of Environmental Studies; Emerging Issues and Implications for Primary Education
- Nature of Science and importance of Science at Upper Primary level
- Scientific knowledge, scientific thinking, scientific methods
- Aims and objectives of teaching Science; NCF–2005 imperatives on learning Science

Unit 2: Social Science Education

- Meaning, nature and scope of Social Science
- Importance of Social Science education at Upper Primary level
- Components of Social Sciences at Upper Primary level: History, Political Science, Economics and Geography; Interrelationships among the subject components of Social Science
- Objectives of teaching Social Sciences at Upper Primary Level

Unit 3: Approaches and Methods

- Approaches - Transmission, Learner-centered, , Process-based , Interactive, Discovery; Activity-based Approach
- Methods of teaching-learning Science/EVS: Observation, Experimentation, Field Trip, Demonstration, Survey, Problem Solving, Project
- Methods of teaching-learning History and Political Science: Story-telling, Narration-cum-discussion, Field trip, Project, Dramatization
- Methods of teaching Geography and Economics: Observation-cum-discussion, Project

Unit 4: Learning Resources, Planning & Assessment

- Learning Resources: textbooks, work books, reference books; Local resources in Science and Social Science and their use

  - Key Resources: Assessing progress and performances, Monitoring and giving feedback, Local and community resources, Using pair work, Using group work, Using questioning (both by teacher and learners) to promote thinking, Talk for learning and Involving all
  - Organizing Science Exhibition, Science Club, Science Quiz, Science Corner, Science Laboratory, Science Museum
  - Historical Maps, Charts, Pictures, Models, Timeline; Geographical Models, Graphs, Maps, Atlas, Globe; Resource room for Social Science
- Planning Lessons: Yearly, Monthly plans; Planning for each lesson- Steps, lesson planning formats
- Learning Assessment: Tools and Techniques of assessment;
- Construction of different types of test items; Recording of the results of assessment and providing feedback; Using the results of assessment for improvement of learning in Science and Social Science.

Sessional Work:

Every prospective teacher-educator shall undertake ***any two*** of the following:

- Preparation of year plan and unit plan in Social Science
- Preparation of 2 lesson plans in Social Science one based on contents of elementary school curriculum
- Preparation of an assessment framework in any one unit in Social Science
- Prepare a paper on any one issue of Social Science Education and present it in seminar
- Visit any of the professional organizations and prepare a report on the in-service professional development programmes that they undertake for Social Science teachers

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

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.

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

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.

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

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

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

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

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.

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

NCERT.(2006). *National focus group position paper on teaching social sciences.* New Delhi: NCERT.

Root, M. (1993). *Philosophy of social sciences*. Oxford: Blackwell.

TESS India (2014). *KeyResources. ttp//www.tess-india.edu.in*

Sartori, G. (ED.) (1984). *Social science concepts: A systematic analysis*. New Delhi: Sage Publications.

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.

PSS-B P.1 : Pedagogy of Physical Science (Paper-1)

Semester III	Credit-4
Marks 100(Ext. 70+ Int.30)	Contact Hours-64

Objectives:

On completion of this course, the prospective teacher-educator shall:

- *State the nature and importance of science and its relevance in elementary school curriculum.*
- *Use various methods and approaches to teaching-learning Science suitable for the elementary school classes.*
- *Plan lessons in science for effective classroom transactions.*
- *Develop and collect activities and resource materials for their use in enhancing quality of learning of Science at the elementary level.*
- *State the concepts in Science included in the elementary school curriculum and make pedagogical analysis of those concepts*

Detailed Course Content:

Unit 1: Science Education in School Curriculum

- Evolution of Science as a discipline, Science as a dynamic body of knowledge
- Nature and Scope of Science at elementary level: Importance of Science in daily life,
- Place of Science in elementary school curriculum; Importance of Science at elementary level
- *Curriculum Reforms in Science Education*: Rationale, objectives, principles, designs and materials in Science, recent curricular reforms at the National and State levels (NCF 2005, SCF 2007).

Unit 2:Aims and Objectives of Teaching-Learning Science at Elementary Level

- Aims and objectives of teaching-learning Science at elementary level; Bloom's Taxonomy and its instrumentation.
- Nurturing process skill; Developing scientific attitude and scientific temper
- Formulating learning objective of teaching Science

Unit 3: Approaches and Methods of Teaching-learning Science

- *Discovery* - Nature and purpose; guided discovery strategies in teaching and learning of concepts in science.
- *Experimentation*- Experimentation within and beyond classroom situation; Processes and limitations.
- *Problem Solving*- Problem identification, formulation of hypotheses, collection of data, testing hypotheses and arriving at solution.
- *Project* – Situation analysis, selection of the project, preparation of the project proposal, implementation of the project, evaluation and reporting
- *Observation* – Types, Process, Recording observation.
- *Constructivist Approaches:* Self-learning and peer learning strategies, Collaborative strategies, Inquiry

Unit 4: Curricular Activities

- Preparation of Unit Plan; Preparation of Lesson Plans (Traditional, Activity Approach and constructivist approach)
- Teaching- Learning Materials - Preparation, collection, procurement and use of teaching-learning materials in Science like, Charts, Graph, Bulletin Board, Models; ICT materials like , Filmstrips, Slides, Transparencies, TV, Audio and Video, Computer, and Internet;
- Learning Activities - Science Laboratory Activities; Field Trip, Science Club, Science Seminar, Science Exhibition
- Using Key Learning Resources for effective classroom transaction in learning Physical Science

Sessional Work:

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

- Preparation of five lesson plans on any topic of Science at elementary level.
- Developing five activities/experiments in Science and prepare a brief report,
- Preparation of a model/tool/device based on any principle of Science included in the course preferably using locally available materials.

- Designing pedagogical treatment for any topic of Science and designing learning activities

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course

Suggested Readings:

Das, R.C. (2005). *Science teaching in schools*. New Delhi: Sterling Publishers.

Herr, Norman & Cunningham, James (1999). *Hands-on chemistry activities with real-life applications. San Francisco, CA:* Jossey-Bass.

Herr, Norman & Cunningham, James(1994). *Hands-on physics activities with real-life applications. San Francisco, CA:* Jossey-Bass.

Joseph,A. (2011). *Teaching high school science : A sourcebook for the physical sciences*. Harcourt, Brace & World.

Kumar, A. (2003). *Teaching of physical science*. New Delhi: Anmol Publications.

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

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

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

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

TESS India (2015). *Key resources.* The Open University U.K.(*http//www.tess-india.edu.in/;*and *http//creativecommons.org/licences*)

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

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

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

RTS Pr.-1: Dissertation (Part-I)

Semester-III	Credit-2
Marks 50 (Internal)	Contact Hours-64

Objectives:

On completion of this part of the dissertation, the prospective teacher-educator shall:

- *Identify the area of research and specify the problem for conducting research.*
- *Complete a thorough review of the related literature on different aspects of the selected problem for research.*

Activities:

Identification of the Problem: Preparing a dissertation on any educational problem after following the methods of Educational Research is one of the important activities of the Programme. During this semester, the prospective teacher educators are exposed to the basics of Educational Research (RTS-I) which provides the basis for initiating the research project at this stage.

As a first step of dissertation work, identification of the problem for research after following the basics of research methodology has been stipulated in this semester. As such activities related to Dissertation Practicum during this semester shall comprise the following:

1. **Identification and Specification of the Problem -** After the review of the research literatures, the prospective teacher educator need to focus on a specific problem area giving proper justifications based on review of literature. The problem for the research has to be specified with proper statement of the problem following international standards (preferably APA standards). Along with the statement of the problem, the researcher needs to specify the variables (independent, dependent, category etc.) involved in the problem.
2. **Review of Related Literature –** Keeping a few educational issues in mind, the student shall go through the related literatures, specifically articles from quality referral research journals, books and original work of reputed researchers in the area(s) of interest. At least 10 articles from international journals or books and 10 from Indian sources need to be reviewed. A report, at least 5 to 8 pages (A-4 size with 12 font letters and 1.5 inter-liner spacing), need to be submitted by each student.

Each candidate is expected to present the final specification of the problem of research supported by the review of research in the seminar for further modification and finalization.

Criteria for Assessment

Sl. No	**Activity**	**Marks**
1.	Problem Identification and Specification	20
2.	Review of Related Literature	30
TOTAL		**50**

RTS Pr.-2: Research Seminar

Semester-III	**Credit-2**
Marks 50(Internal)	**Contact Hours-64**

While participation in seminar activities for the students in this programme shall be a regular feature across the semesters, involvement in research seminar is an essential requirement as required under the 'Research, Tools & Self Development (RTS)' component. The research seminar is essentially meant to help the students to focus on their respective area of research through probing, sharing and developing their research project.

Objectives

The prospective teacher-educator shall:

- *Develop ability to share the acquired knowledge and understanding specific to their area of research*
- *Share the different dimensions of research with peers and faculty members*
- *Prepare research based paper and improve it with intensive peer deliberation*

Mode of Organization

- Depending on the number of students, the institution shall decide on the number and duration of research seminars to be conducted so that each student shall get opportunity of presenting his/her research proposal on its three aspects viz. (i) the rationale of the topic emerging from related literature, (ii) method of research, and (iii) mode of analysis and discussion of results.

  Other topics related to the areas relevant to the research may also be included for deliberation in the research seminar.
- Presentation of papers, participation in the seminar and preparation of the seminar reports shall be the three basic components of the seminar activities which shall constitute the basis of assessment. Every student may be given opportunity to prepare seminar report.
- Attendance in the research seminars by a student shall not be below 90 percent.
- The criteria of assessment as specified below may further be refined by the respective institutes.

Criteria of Assessment

Activity	Marks
Quality of the Seminar paper	20
Mode of presentation	15
Extent and quality of participation	07
Quality of Seminar Report	08
TOTAL	**50**

PSS Pr.-III: School Internship-III

Classroom Transaction and Related Activities

Semester-III	Credit-4
Marks 100 (Internal)	**Contact Hours- 6 weeks**

The major thrust of the school internship programme, among other closely related activities like school exposure and exposure to multi-cultural contexts in schools, is to broaden the visions and improving the performance capabilities of the prospective teacher-educator on the classroom transactions to enhance the quality of teaching-learning process. While engaged in improving the classroom performance as a teacher, the prospective teacher-educator needs to be efficient in several related activities like planning the academic activities for one academic session, preparation of lesson plans on a regular basis, developing, collecting and managing resources (materials, activities and human) for teaching and learning in and out of classroom. Besides developing these abilities as professional teachers, these activities during this part of the school internship are intended to prepare prospective teacher-educators for mentoring the student-teachers in their basic roles as effective classroom teachers.

Objectives:

After completion of this course, the prospective teacher-educator shall:

- *Develop professional capabilities and sensibilities as an effective teacher and maintain sustained engagement with learners and teachers of schools.*
- *Acquire required skills and competencies to cater to diverse needs of the learners in schools*
- *Apply the theoretical understanding developed through various perspective and pedagogic courses in the actual classroom practices for enhancing quality of teaching and learning.*
- *Internalize the role of a teacher and a teacher-educator – as a facilitator of learning, classroom manager, resource mobilizer and manager, innovator, evaluator of learner performance, planner and organizer of other curricular activities, mentor and counselor for children and practicing teachers, developer and evaluator of curriculum text books and other TLMs etc.*

Organization:

The activities during this internship programme shall be conducted in three phases as follows:

I. Preparatory Activities,
II. Activities during Classroom Transaction,
   a. Teaching-Learning Activities
   b. Other Related Activities
III. Follow up Activities.

I. Preparatory Activities

Prior to conduct of teaching-learning activities in the classroom, the following preparatory activities shall be completed:

- Orientation of the prospective teacher-educators,
- Sharing meeting with the teachers and headmasters of the cooperating schools in the institution and working out the programme details for the internship
- Demonstration lessons by the faculty members followed by post-demonstration discussion
- Criticism lessons by the student-teachers(one lesson by each student-teacher in any one of the methods opted) under the supervisory support of the method teachers, attended by all prospective teacher-educators of the method concerned
- Placement of prospective teacher-educators in cooperating schools for internship activities.

II. Classroom Transaction Activities

Each prospective-teacher educator shall have to perform two categories of interrelated activities in the classroom and school: Teaching-learning activity as per the time table of the school, and other related activities for facilitating learning.

a. Teaching-Learning Activities

- Preparation of lesson plans along with the required TLMs by the prospective teacher-educator in his/her concerned pedagogy subject for conducting teaching-learning transactions with the students of the allotted class.
- Delivery of practice lessons by the prospective teacher-educator with supervisory support and feedback from faculty members. Each shall deliver 20 lessons in the concerned school subject he/she offers, excluding the criticism lesson. Out of these 20 lessons, 30% (6 nos.) shall be delivered in the upper primary classes (Classes VI to

VIII) and the remaining 70 % (14 nos.) lessons in the secondary classes (Classes IX and X).

- Observation of five peer-lessons and recording of the performance with authentication by the concerned supervisors.
- Feedback session in the Teacher Education Institution after each spell of ten-day practice teaching to be attended by all prospective teacher-educators for sharing their experiences.

b. Other Related Activities

Activities related to promote learning like the ones indicated below shall be conducted by each prospective- teacher educator: Each has to perform ***at least 04(four) activities*** including the items marked by '**'.

- Preparing scheme of lessons in the subject teaching in the class**
- Preparation of TLMs, Learning Activities and model test items**
- Preparation of wall magazine/news bulletins
- Participating in classroom beautification activities
- Taking arrangement classes when required
- Organizing and participating in school literary and recreational activities
- Conducting quizzes, debates song and drawing competitions in the classroom
- Organizing of and participating in science exhibition, science fair, science club/nature study club/eco club activities, Mathematics Melas, Art and Craft exhibitions etc.
- Innovative teaching- learning activities

III. Follow up Activities

- Presentation of innovative and creative work done by the prospective-teacher educator during internship.
- Suggestions and feedback from the teachers and Heads of the cooperating schools for further improvement of the internship activities
- Sharing of prospective-teacher educators' internship experiences in the institution and their feedback on overall organization of internship programme for future action.

Attendance

- The minimum attendance of each student-teacher for school internship programme shall be 90%

Assessment of Internship Performance

The classroom transaction activities and the follow up activities shall be assessed internally as per the following criteria.

Criteria for Assessment of Internship and Records

Activities	Marks
1. Assessment of classroom teaching and other school activities rated by the headmaster and the teachers of the school.	20
2. Assessment of Lesson Plan Record	15
3. Peer assessment of the lessons	10
4. Assessment of lessons delivered as per the	25

plan by the faculty members	
5. Assessment of other related activities (5× 4)	20
6.Presentation and participation in follow up activities	10
TOTAL	**100**

Each Teacher Education Institution shall prepare a detailed plan on school internship programme for Classroom Transaction and Related Activities in consideration of the activities indicated above sufficiently in advance of commencement of the activities.

The assessment, which is entirely internal, may be conducted preferably by a team of faculty members specifically designated for the purpose.

PSS Pr.-IV: Interaction with Community

Semester-III	Credit-1
Marks- 25 (Internal)	**Contact Hours-32**

As education has become one among the essential needs for living for every individual, schools need to maintain close liaison with the communities in its neighborhoods for ensuring enrolment, retention and providing education of high quality. The prospective teachers as well as teacher-educators are required to be well informed regarding the socio-economic-cultural status and needs of the communities nearby the schools and ways to interact with community members including the parents regarding their mutual efforts on a continuous basis for creating an enabling school climate for ensuring quality education for their children.

Objectives:

After the completion of this programme, the prospective teacher-educator shall:

- *Acquaint himself/herself with the factors working within the society, community i.e. knowledge of social realities that have bearing on school and education.*
- *Arouse his/her interest in the processes of social and economic reconstruction of the community.*
- *Develop awareness on the educational and social issues and needs of the community*
- *Identify and plan for using community resources, both material and human, for enriching the quality of school education*

The students (prospective teacher-educators) may spend two weeks at a stretch during the Semester 3 in the identified villages/communities and/or in locations decided by the institute/department. Separate activities may be planned every year.

Interaction Strategies:

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**.** may be employed for more meaningful interaction.

Suggested Activities:

- micro planning of a school community relationship along with the survey on educational status of the community
- study of the nature of community participation in a elementary/secondary school activities
- survey of community resources for participation in scholastic and co-scholastic activities of a school
- educational survey of urban slums
- report on social customs, traditions and practices and their bearings on education of the children of the community in the selected localities
- survey of a village/town with at least 20 households to study the socio-economic and educational status of the inhabitants
- study of food habits of 10 houses, 5 each of urban and rural area and suggest balanced diet
- tree plantation programme in the campus/nearby village
- survey of parent's attitude towards education of their children
- organization of campus beautification programme with community participation
- identification of problems of parents with respect to education of their children
- conducting awareness programmes in the community – like Environment conservation, tree plantation, watershed management, health programmes, like vaccination, polio drop etc.
- survey of AIDS awareness, electoral awareness, road safety, human rights, women rights, literacy programmes etc. in the community
- cleanliness drives in the community and awareness about its needs
- training of community on some simple vocations for self-employment
- training of community in First Aid
- organizing national programmes like '***Swatchha Bharat Abhiyan', 'Padhe Bharat, Badhe Bharat', 'Beti Bachao, Beti Padhao', 'Kaushal Bharat, Kushal Bharat***' in the community

Many more such exercises could be conceived and can be conducted individually or in groups under the supervision of faculty members.

Assessment Criteria

Prospective teacher educators are required to complete at least 2 (TWO) activities as suggested above or otherwise and submit the report which shall be evaluated internally by a committee constituting of at least 3 faculty members.

The performance of the prospective teacher-educators shall be assessed holistically and marks shall be awarded out of the total 25 marks based on degree of involvement of the candidate in selection, strategy building, participation and the quality of the report.

PSS Pr.-V: Discourse with Other Related Agencies

Semester-III	**Credit-1**
Marks- 25 (Internal)	**Contact Hours-32**

There are several institutions and organized social groups situated and functioning in the catchment areas of the school having potential for supporting school education in various ways, both formal and informal manners. Examples of such institutions and organizations are Banks, Post Office, Hospitals/Health Centers, Panchayati Raj Institutions, Agricultural farms, Self-help Groups, Youth Clubs and the like. This programme aims at raising the awareness levels of prospective teacher-

educators, school functionaries and the concerned institutions and organized groups regarding their roles and the ways in promoting quality of school education

Objectives:

After the completion of this programme, the prospective teacher-educator shall

- *Gather intimate knowledge of the structure and functioning the institutions/organizations and their sphere of activity.*
- *Explore the scope of collaboration of local institutions/organizations with the developmental and academic activities (both curricular and other curricular activities of the schools.*
- *Develop a tentative plan of action with the local institutions/agencies/social groups for their collaboration with school activities*

Interaction Strategies

Observation, Interview, Individual and Group Discussion, Case Study, Video recording

Suggested Activities

- Survey of activities of local NGO/ Club/ community center/ Self Help Group/ Panchayat/ press/ TV channels/ Community radio etc. and their implications for education
- Visit to Anganwadi Centers and interaction with SHG in the locality to study their functioning.
- Focus group discussion of the members of any institution/organization on their functioning and scope of collaboration with the schools
- Preparation of report on the developmental activities of different organizations where the students and teachers can be involved for a social cause thus enhancing their learning.
- Developing a document of inter-organizational collaboration in developing school development and students' learning.

Several such other activities for encouraging discourses with related agencies at the local level can be conceptualized at the respective teacher education institutions/department.

Assessment Criteria

Prospective teacher educators, individually or in groups, are required to have discourse with any 2 (TWO) activities as suggested above or otherwise and submit the report which shall be evaluated internally by a committee constituting of at least 3 faculty members.

The performance of the prospective teacher-educators shall be assessed holistically and marks shall be awarded out of the total 25 marks based on degree of involvement of the candidate in selection, strategy building, participation and the quality of the report.

FOURTH SEMESTER

PC-2: Philosophical Perspectives of Education

Semester-IV	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours-64

Objectives:

On completion of the course the prospective teacher-educator shall:

- *Explain the structure of Philosophy in terms of its elements and their relationship.*
- *Explain the inter-relationship between Philosophy and Education.*
- *Understand the Indian Philosophical traditions and their implications for life and education.*
- *State the basic postulates of different western Philosophies and their implications for education.*
- *Understand the contributions of educational thinkers to educational thought and practice in western and eastern countries.*
- *Analyze different issues in Educational Philosophy and workout the strategies.*

Detailed Course Content:

Unit 1: Philosophy and Education

- *Philosophy*: Meaning, nature and function (Western and Eastern view points)
- *Structure of Philosophy*: Metaphysics, Epistemology, Axiology (Ethics and Aesthetics) and Logic,
- *Philosophical methods*: Contemplation, Speculation, Enquiry and Analysis,
- *Philosophy and Education*: Their Interrelationship; Educational Philosophy - Emergence, meaning, nature, functions and scope.

Unit 2: Indian Philosophical Traditions

- Vedic Philosophy - Concept of Chaturashram and Purusartha,
- Vedanta Philosophy - Features; Education in Upanishadas,
- Philosophy of Jainism and its contributions to education,
- Philosophy of Buddhism and its contributions to education.

Unit 3: Western Philosophical Traditions

- Idealism, Naturalism, Pragmatism and Realism: Their basic philosophical postulates and implications for Education,
- Eclecticism and its educational implications,
- Contemporary/modern educational thought: Essentialism, Perennialism and Progressivism - Features and their implications for education,
- Existentialism and Humanism : Salient features and their implications for education.

Unit 4: Great Educational Thinkers

- Plato, Aristotle and Socrates - Relevance of their educational thoughts in the present context
- Rousseau, Froebel, Montessori, John Dewey and Paulo, Friere – Their educational ideas and experiments, and the present relevance

- Gandhi, Tagore, Sri Aurovinda, and Vivekananda - Their educational thoughts and experiments, and their relevance in the present India
- Dayananda Saraswati and J. Krishanamurthy - Their contributions to educational thought and practice in the present India

(Discussion be made with reference to aims of education, curriculum, teaching-learning pedagogy, role of teacher and discipline

Sessional Work:

Every prospective teacher-educator shall undertake *any two* of the following:

- Preparation of an appraisal report on inculcation of values through curriculum and pedagogy in Government and private-managed schools in Odisha.
- Preparation of a write-up on essence of Indian Philosophical traditions and its relevance to present educational scenario in India.
- Preparation of seminar paper on contextual relevance of Paulo Friere's educational ideas to present Indian education.
- Review of the text titled "The Pedagogy of the Oppressed" by Paulo Friere.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

Amaldass, A. (2001). *Introduction to Philosophy.* Chennai: satyaNilayam Publications.

Brubacher, J. (1962). *Modern Philosphies of Education*. McGraw-Hill Co.

Butler, J.D. (1968). *Four Philosophies and their Practice in Education and Religion* (3rd Ed.) New York: Harper and Row Publisher.

Chakravarthy, D.K. (2000). *Fundamental Questions of Epistemology and Metaphysics.* New Delhi: Omsons Publications.

Chaube, S.P., and Chaube, A. (2007). *Philosophical and Sociological Foundations of Education.* Agra: Vinod PustakMandir.

Deota, N.P. (2012). *Effective Leadership Qualities.* Germany: Lap Lambert Academic Publishing.

Deota, N.P. (2012). *Kaleidoscopic Views on Education*. Germany: Lap Lambert Academic Publishing.

Dewey, J. (1963). *Democracy and Education*. New York: Mac Millan & Co.

Kabir, H. (1961). *Indian Philosophy of Education*. Bombay: Asia Publishing House

Park, J. (Ed.) (1968). *Selected Readings in the Philosophy of Education (3rd Ed.)*. London: The MacMillan Company.

Radhakrishnan, S. (1953). *History of Philosophy: Eastern and Western* (Vol. I and II). London: George Allen & Unwin Limited.

Sharma, R.N. (2000). *Textbook of Educational Philosophy.* New Delhi: Kanishka Publishers & Distributors.

Smith, P.G. (Ed.) (1970). *Theories of Value and Problems of Education.* London: University of Illinois Press.

Thakur, A.S. (1977). *The philosophical Foundations of Education.* New Delhi: National Publishing House.

RTS-5: Self Development

Semester-IV	Credit-2
Marks 50 (Ext.35+Int.15)	Contact Hours-32

Objectives:

On completion of this course, the prospective teacher educator shall:

- *Elaborate the different dimensions of self-development and different goal setting behaviour of an individual thereof.*
- *Explain the strategies for personal development in work place thereby improving professional competence.*
- *State the characteristics development of self-development from early childhood to youth.*
- *Realize the ways of personal development through development of self-awareness.*

Detailed Course Content:

Unit 1: Understanding Self-Development

- Concept, importance , objectives and dimensions- knowledge and awareness, self-esteem/self-identity, dreams and aspirations, self-analysis and assessment
- Goal setting and self-development: Developing competence, achieving autonomy, developing purpose, developing integrity, managing emotions, developing matured interpersonal relationships
- Personal development in work place- work-life balance, time management, stress-management, social relation management and counseling.
- Self-development and professional competence: indicators of professional competence, self-development facilitating professional competence

Unit 2: Self-Development across the Life Span

- Self-awareness during infancy: sensory motor feedback and self awareness, contingency cues and self-awareness, visual self-recognition, milestones in self-development during the first 2 years of life.
- Developmental changes in self-feelings and self-concepts during childhood adolescence and youth.
- Adolescence identity crisis: Erickson's stages of Psycho-social development and crisis resolution in self identity.
- Self concept during adulthood.

Unit 3: Self-Awareness and Personal Development

- Personal development: meaning, characteristics, uniqueness
- Ways to improve personal development- Methods and learning programmes
- Self-awareness for Personal Development: self-analysis of personal strengths, weaknesses, opportunities and threats, self-reflection and self-criticism as means of self-awareness
- Techniques of personal development:

Sessional Work

The prospective teacher-educator shall undertake ***any one*** of the following:

- Preparation of a report on personal development in work place relating to any profession.
- Prepare a seminar presentation on crisis of self-development among the secondary school learners and strategies to resolve.
- Preparation of a set of activities for personal development elementary school children.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

Agochiya, Devendra (2010). Life Competencies for Adolescents-Training Manual for Facilitators, Teachers and Parents, Sage Publications Pvt. Limited, New Delhi

Bandura, A. (1982). Self-efficacy and mechanism in human agency. *American Psychologist,*

Bandura, A. (1986). *Social foundations of thought and action*. Englewood Cliffs, NJ: Prentice

Bandura, A. (1993). Perceived self efficacy in cognitive development and functioning.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: Freeman.

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

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

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

Schneider, F.W., Gruman, J.A. & Coutts, L.M. (Eds.) (2012). *Applied Social Psychology-Understanding and Addressing Social and Practical Problems* (2nd Edn). New Delhi: Sage Publications.

Sherfield, R.M.; Montgomery, R.J.; & Moody, P.G. (Eds.) (2009). *Cornerstone- Developing soft skills* (4th Edn). New Delhi: Pearson Education

Swami Vivekananda (1988). *Selections from the complete works of Swami Vivekananda*. Mayavathi: Advaita Ashrama.

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

UNICEF (2006). *Life skills modules-Adolescence Education Program*. New Delhi: UNICEF.

Venkateshamurthy, C. G. & Govinda Rao, A.V. (2005). *Life skills education training package.* Mysore: R.I.E.

TEC-1: Perspectives in Teacher Education

Semester-IV	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours-64

Objectives:

On completion of the course, the prospective teacher-educator shall:

- *State the importance of pre-service and in-service teacher education in respect of growing demands for quality school education.*
- *Describe the development of teacher education in India during post independence period.*
- *Specify the characteristics, needs and challenges of teacher education at the elementary and secondary level.*
- *Elaborate the visions for teacher education in response to the emerging demands of the changing scenario of school education.*
- *State the importance of continuing professional development of teachers and the efforts made so far in this direction through different national and state programmes.*
- *Use various methods and approaches appropriately in curriculum transaction in teacher education courses.*

Detailed Course Content:

Unit 1: Understanding Teacher Education

- Teacher Education : Concept, Importance (with reference to teaching profession and quality education), Components (Pre-service and In-service).
- Development scenario in India: Post-independent scenario with reference to the recommendations of Secondary Education Commission (1952-53), The Education Commission (1964-1966), National Policy on Education, 1986 / 92, POA, 1990,NKC,2009 on Teacher Education system.
- Envisioning Teacher Education in response to emerging demands of school education; Bases of envisioning – NCF, 2005, NCFTE, 2009, RTE Act 2009, Justice Verma Commission, 2012, MHRD (GoI), 2012.

Unit 2: Pre-service Teacher Education Programme

- Pre-service teacher education: Meaning, Importance, Objectives and Modes (face-to-face and distance).
- Stage specific programmes - Pre-school, Elementary and Secondary and Higher Secondary Teacher Education Programmes with reference to duration, curriculum, staffing pattern, assessment etc as per NCTE Regulations, 2014.
- Stage specific Teacher Education Institutions in Odisha – Preschool , Elementary (ETEIs, DIETs, BITEs), Secondary and Higher Secondary (Govt. Training Colleges, CTE, IASEs) with reference to their structures and functions.
- Addressing issues in PSTEP in Odisha with reference to institutional facilities, enrolment to the programmes, human resources, curriculum development and transaction processes, linkages with support institutions.

Unit 3: In-service Teacher Education Programme

- In-service teacher education: Meaning, importance and objectives in the context of Continuing Professional Development (CPD).
- Types of programme – Subject-based (content and pedagogy) and theme-based with reference to their objectives, duration, components, planning and organization (assessment of training needs, structuring training components and developing course materials).
- Approaches and modes of organizing CPD: Approaches- self study, participatory (workshops, panel discussion, FGD etc); Modes - face-to-face and distance/open learning (OER) with reference to their objectives, advantages and limitations.
- Addressing challenges in CPD in Odisha with reference to planning, organization, collaboration, programme quality, assessment and feedback; importance and role of professional learning communities for CPD; role of professional organizations for professionalism and professional ethics.

Unit 4: Management and Support Services

- Management structures and their functions at elementary and secondary levels in Odisha - SME Department, DTE&SCERT, Teacher Education Institutions (Elementary and Secondary).
- Support organizations: National level - MHRD, NCERT, NUEPA, NCTE. and UGC; State level – SCERT, OPEPA, OMSM, BSE, ELTI and UNICEF (Odisha Office) with reference to their roles and functions.
- Challenges and issues relating to - governance system, human resource, collaboration among the stakeholders, job opportunities and recruitment, service conditions etc.

Sessional Work

A student-teacher shall undertake ***any two*** of the following activities.

- Preparing a report on the programme for developing professionalism in primary teacher training institution through field visit.
- Developing a strategy suggesting reforms in secondary teacher education programme with reference to NCF - 2005 and RMSA.
- Preparation of a course material for meeting the needs of a teacher in any subject at the secondary level.
- Conduct of a team teaching programme in teacher education institute and reporting on its impact.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings

Beck, Clive & Clark Kosnik Albany (2006): *Innovations in teacher education: A social constructivist approach.* London: State University of York.

Cohen Louis, Minion Lawrence & Morrison, Keith (2004). *A guide to teaching practice* (5th Edn.). London and New York: Routledge Falmer..

Darling Harmmond, Linda and Bransford, John (2005). *Preparing teachers for a changing world.* Son Francisco: John Wiley & Sons.

Day, C. and Sachs, J. (Ed.) (2004). *International handbook on the continuing professional development of teachers.* Maidenhead: Brinks Open University Press.

Furlong John (2013), *Education: An anatomy of the discipline*. London: Routledge.

Govt. of India (1953). *Report of Secondary Education Commission*. New Delhi.

Govt. of India (1986/1992). *National policy of education*. New Delhi: Dept. of Education, MHRD.

Govt. of India (1996). *Report of Indian Education Commission (1964-66).*. New Delhi.

Herne Steve, Jessel John and Griffith, Jenny (2000). *Study to teach: A guide to studying in teacher education*. London and New York: Routledge Falmer..

Korthagen, Fred A.J.et al. (2001). *Linking practice and theory: The pedagogy of realistic teacher education.* New York: Lawrence Erlbaum Associates.

Loughran, John (2006). *Developing a pedagogy of teacher education : Understanding teaching and learning about teaching.* New York: Routledge.

Miyan, Mohammad (2004). *Professionalisation of teacher education*. New Delhi: Mittal Publications.

Mukhopadhyay, Sudesh and Anil Kumar, K (2001). *Quality profiles of secondary schools*. New Delhi: NIEPA.

NCERT (1997). *Code of professional ethics for teachers.* New Delhi.

NCTE (1998). *Competency based and commitment oriented teacher education for quality school education: Pre-service education*. New Delhi.

NCTE (1998): *Policy perspectives in teacher education*. New Delhi.

NCTE (2009). *Curriculum framework of teacher education*. New Delhi.

NCTE (2014). *Norms and guidelines of teacher education programme*. New Delhi.

NCTE. (1998). *Policy perspective in teacher education: Critique and documentation*. New Delhi.

Reimers, Eleonora Villegas (2003). *Teacher professional development: An international review of the literature.* Paris: IIEP,UNESCO.

Sahoo,P.K.et al (Eds.) (2010). *Professionalism in teacher education*. New Delhi, Concept.

Siddiqui, M.A. (1993). *In-service education of teachers*. New Delhi: NCERT.

Singh L.C. (Ed 1990). *Teacher education in India*. New Delhi: NCERT.

Yadav, M.S. and Lakshmi, T.K.S. (2003). *Conceptual inputs for secondary teacher education: The instructional role.* New Delhi: NCTE.

PSS-B P.2 : Pedagogy of Social Sciences (Paper-2)

Semester-IV	Credit-4
Marks 100 (Ext. 70+ Int.30)	Contact Hours-64

Objectives:

On completion of the course, the prospective teacher-educator shall:

- *Develop skills and pedagogical competencies to formulate specific learning outcomes for different contents of History, Geography, Political sciences and Economics;*
- *Acquire different characteristics to become a professionally competent social science teacher*
- *Construct appropriate tools and techniques for assessment of the students learning outcomes in social sciences*
- *Critically analyze text book and syllabus of social science subjects at different stages of school education*
- *Develop skills to organize and conduct various activities related to social science areas*

Detailed Course Content:

Unit 1: Creating Holistic Identity through Social Sciences

- Evolution of social science curriculum
- Piecemeal approach Vrs. Holistic approach, Importance of Integrated approach over separate specific subject approach at secondary stage
- Evolution of human over time- shifting from historiography
- Evolution of human as space physical geography
- Polity nurturing identity of human in democratic framework promoting effective citizenship
- Consumer protecting human from evil effect consumerism
- Aims and objectives of social sciences at secondary stage of school education

Unit 2: Learning Resources in Social Sciences

- 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, Open Education Resources, satellite imagery and aerial photograph.

Unit 3: Teaching-learning Strategies in Social Sciences

- 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, collaborative, cooperative learning, dramatization, simulation, mock parliament,

- Lesson Planning: 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 for secondary level
- Preparation of lesson plan based on 5E Model and ICON Model of learning strategies

Unit 4: Assessment in Social Sciences

- 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 scholastic and co-scholastic areas of learning
- Importance of diagnostic testing and remedial activities in social sciences

Sessional Work:

A prospective teacher-educator shall undertake ***any two*** of the following activities:

- Visit to historical sites/monuments/national archives/ state archives/museum and prepare a report on their utility as educational resources
- Visit to village/town/industrial sites/hydro/power point stations/mining/tourism places/agricultural/production sites and preparing a report specifying their resources for on -site learning of secondary school students
- Developing 2 lesson plans in Social Sciences, one each using 5E Model and ICON Model,
- Prepare a concept map on any one unit of Social Sciences content at the secondary level

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

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.

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.

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.

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

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

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

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

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.

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.

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

PSS-B P.2 : Pedagogy of Physical Science (Paper-2)

Semester- IV	Credit-4
Marks 100 (Ext. 70+ Int.30)	Contact Hours-64

Objectives:

On completion of this course, the prospective teacher-educator shall:

- *State nature and importance of Physical Science at secondary school level*
- *Plan learning designs based on problem situations, enquiry and projects to facilitate learning of Physical Science*
- *Realize his/her role as a facilitator enhancing Physical Science learning in the real classroom situation*
- *Explore different ways of creating learning situations considering learning needs and context of the learner*
- *Use learning resources as per the learning needs*
- *Familiarize with various tools and techniques of assessing physical science learning*

Detailed Course Content:

Unit 1: Nature and Scope of Physical Science

- Nature and Scope of Physical Science at secondary and higher secondary levels
- Place of Physical Science in secondary school curriculum: Place and importance; Correlation of Physical Science with other school subjects
- Aims and objectives of teaching learning Physical Science at secondary level; Specification of learning objectives

Unit 2: Planning of Facilitating Learning in Physical Science

- 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
- Planning lessons based on behaviourist and constructivist approaches - 5E model, ICON model

Unit 3: Learning Resources in Physical Science

- Laboratory as a leaning resource: Structure, design, organization and maintenance of the laboratory
- Improvisation of teaching aids
- Different forms of ICT and their application in teaching and learning Physical Science
- Integration of ICT in teaching-learning processes of Physical Science

Unit 4: Learning Assessment in Physical Science

- Learning indicators in Physical sciences and assessment of these learning indicators in the form of learning evidences/ outcome in classroom and laboratory
- Construction of classroom tests and unit test.
- Alternative strategies for assessment like 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.

Sessional Work:

A prospective teacher-educator shall undertake ***any two*** of the following activities:

- Preparation of a yearly plan in Physical Science for any one grade at secondary school level
- Preparation of 2 lesson plans in Physical Science- one based on behaviourist and another on constructivist approach
- Preparation of an assessment framework in any one unit in Physical Science 4. Debate(choose any one topic from unit
- Preparation of a report based on observation of any one programme for capacity development in Science teaching of secondary school teachers

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

Alsop,S., Hicks, K. (2007). *Teaching science: A handbook for primary and secondary school teachers*. New Delhi: Kogan Page.

Bennett, Judith (2003). *Teaching and learning science : A guide to recent research and its applications*. London: Continuum.

Carin, A and Sund, B. R. (1964). *Teaching science through discovery*. Columbus Ohio: Charles E. Merrill Books Inc.

Martin, R., Sexton,C., Wagner, K. and Gerlovich, J, (2000). *Science for All children : Methods for constructing understanding.* London: Allyn and Bacon,.

Millar, Robin (1984). *Doing science : Images of science in science education*. London: The Falmer Press,.

Nathan S Washton (1967). Teaching Science Creatively, Saunders Company, London.

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

NCERT(2011). *Pedagogy of physical science* (Part I&II). New Delhi: NCERT.

Novak, D. J. and Bob Gowin, D. (1984). *Learning how to learn*. Press Syndicate of the University of Cambridge, Ohio.

SSC-1: School Education: Systems, Structures and Functions

Semester-IV	Credit-4
Marks 100 (Ext. 70+ Int.30)	Contact Hours-64

Objectives:

On completion of the course, the prospective teacher-educator shall:

- *Develop insights into nature and types of education systems prevalent in India;*
- *Understand the systems involved in the development of school education;*
- *Appreciate the role of various structures of school education;*
- *Appreciate the role of different structures of school education;*
- *Develop critical understanding of commissions, National Curriculum Frameworks, policy papers and different thrust areas for school education*.

Detailed Course Content:

Unit 1: Introduction to School Education

- Definition and Meaning of School Education;
- Aims and Objectives of School Education in the present context;
- Nature of instructional system in school education;
- School and Classroom as social system; Role of teacher as an agent of bringing social change through schooling - success and failure in the present context;
- The Symbiotic relationship of School and Community.

Unit 2: School Education System

- System Characteristics: Concept of organization systems - meaning, elements of a system- Resources, procedures, data/information, intermediate data, processes; System

characteristics- Outputs and inputs, Processors, Control, Feedback, Environment, Boundaries and interfaces; Types of systems- Physical and abstract, Open and closed; School as an open system;

- Types of schools by management prevalent in the country: Government, Government-aided, Private; Religious minority schools; Tribal schools; Model schools; Common School System - Concept and goals, Neighborhood Schools; Kothari Commissions recommendations, Implementation drawbacks;
- Teacher preparation systems for different levels of schooling (Pre-schools, Elementary, Secondary and Senior Secondary schools);
- Specific roles played by national education policies and curriculum frameworks for systemic improvement at school level.

Unit 3: Structure of School Education

- Segmentation of school structure according to levels, boards, medium, and ownership;
- The structure of pre-primary, elementary, secondary and senior-secondary. Evolution of school structure in India after Independence: from {Lower Primary(3yrs)+ Primary (2yrs)+UP(2yrs)+Secondary (4yrs)} to the present structure of {Primary (5yrs)+UP(3yrs)+Secondary (2yrs) + Higher Secondary (2yrs)};
- Comparison of School Boards (CBSE, ICSE, STATE BOARDs) across India;
- Common School System - Concept; Historical background, Need and importance in Indian Context; Recommendation of Kothari Commission, Reasons of non-implementation of the recommendation.

Unit 4: Functions of School Education

- The functioning of the school system as a whole; The effectiveness and efficiency of school functioning - Internal and External; Indicators of internal efficiency of school functioning (Retention and Dropout rates, promotion rate, grade repetition rate, grade survival rate, transition rate);
- Different stake holders and their roles in the functioning of the schooling: Principal/ Head teacher, teachers, parents, students, School administration, Community
- The different latent functions of school:
    - Socialization: personal identity and social conduct, school as an instrument of social change
    - Enculturation: transmission of cultural norms and values, national identity and citizenship roles; Aculturation: pluralism, the school's role in pluralistic society
    - Values through school education: Personal, social, artistic, political, religious, spiritual, intellectual, moral and economic
    - Education for Environment Protection and Pollution control

Sessional Work:

Every prospective teacher-educator shall undertake *any two* of the following:

- Collection of evidences of different systems of education
- Develop a report of school functionaries
- Group work for preparation of paper on education curriculum frameworks and national education policies.
- Group discussions on: education through ages, socialization and Culturization.

- Seminar presentation on the role of teachers in school system in different types of schooling
- Case Study of a particular type of school

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

Chagla,M.C. (1966). *Education and the nation*. NewDelhi: Allied Publishers,.

Chakrabarti, M. (1997). *Organization of school education*. New Delhi: Concept Publishing Company,

Ghosh, S.C(2007). *History of education in India*. New Delhi: Rawat Publications,.

Malhotra, P.L., Parakh. B.S., and Misra, C.H.K. (1986). *School education in India: Present status and future needs*. New Delhi: NCERT.

Mohanty, J. (2004). *School management: New trends and innovations*. New Delhi: Deep & Deep Publications..

Mohanty, J. (2008). *Studies in school education*. Deep & DeepPublications, Pvt. Ltd. New Delhi.

Singha, H.S. (1991). *School education in India: Contemporary issues and trends*. New Delhi: Sterling Publishers.

RTS Pr.-1: Dissertation (Part-II)

Semester-IV	Credit-2
Marks 50 (Internal)	Contact Hours- 64

Objectives:

On completion of the course in this semester, the prospective teacher educator shall

- *Finalize the research proposal for the identified problem.*
- *Develop the tools for the study.*

Activities

The activities concerned with the dissertation work in this semester have been divided into two parts: Finalization of the research proposal and construction/adoption of tools for the study.

3. **Finalization of Research Proposal:** The proposal needs to be prepared and presented in the research seminar. The proposal shall include the rationale for the study (emerging from the reviews of related literature), objectives and hypotheses, the method with specifications of participants (sample), tools, procedure of data collection and data analysis. The draft proposal shall be finalized after being shared in research seminar.

4. **Development/Adoption of Tools**: Following the provisions in the research proposal, the researcher shall construct the tools with guidance of the mentor faculty member and after discussion on it in the seminar the tools need to be finalized. If the researcher intends to use available tools suitable for the study, those tools need to be modified for adoption. In either cases, the tools need to be finalized after try out and necessary item analysis.

Assessment Criteria

Activity	Marks
1. Preparation of Research Proposal	
➢ Preparation of Research Proposal	15
➢ Seminar presentation and finalization	10
Total	**25**
2.Development of Tools	
➢ Tool development/adaptation	15
➢ Presentation of the tools and their modification	10
Total	**25**
GRAND TOTAL	**50**

TEC Pr. : Attachment with Elementary and Secondary TEIs (Internship in Teacher Education Institutions)

Semester-IV	Credit-4
Marks 100 (Internal)	Duration- 6 weeks

Objectives:

On completion of this programme the prospective teacher-educator shall:

- *understand his / her roles as teacher-educator, after observing an analyzing the activities of the teacher-educators in the teacher education institutions (elementary and secondary)*
- *involve himself / herself actively in various activities and processes of a teacher education institution and perform multiple roles of a teacher-educator.*
- *transact the teacher education curriculum and organize related activities effectively.*
- *experience continuing professional development programme after assessing the needs of the in-service teacher.*

Activities to be performed in TEIs

1. Pre-service Teacher Education Activities

i. Observation of classroom teaching (in D.El.Ed. and B.Ed. classes) and other pedagogic practices of the teacher education institutions to which the candidate is attached and preparation of a report.

ii. Delivery of 10 lessons in D.El.Ed. and B.Ed. courses (at least 5 in each course) under the supervision of the mentor concerned

iii. Participation in seminar discussions and other curricular activities in teacher education institutions to be assessed by a group consisting the mentor and the faculty of the concerned TEIs.

2. In-service Teacher Education Activities

Observation of at least one programme (with the help of a predesigned observation schedule prepared at their TEI) of capacity building programme (CPD) being conducted in the DIET/CTE/IASE and interaction and discussion with the resource persons and participants te on the processes of need assessment, programme design, conduct of the programme and follow up activities, and preparation of a report.

3.Overall Experiences in the TEIs,

Each prospective teacher educator is required to prepare a comprehensive report on the following:

- Institutional profile of the TEIs to which he/she was attached
- The details of activities conducted and participated in the TEIs
- A reflective journal on the activities (preservice, inservice, curricular and other curricular activities and overall institution functioning)

Assessment of Internship Activities

The performance of each prospective teacher-educator in the aforesaid internship activities shall be assessed internally by a group of faculty including the mentor(s) as would be decided by the institution. The marks for each activity are as follows:

Activity	Marks
1.Pre-service Teacher Education Activities	
i. Sharing of classroom observation report	10
ii. Lesson plans and delivery of lessons (in D.El.Ed. and B.Ed. classes) by the concerned mentors	10+10
iii. Participation in Seminar and other activities	10
Total	**40**
2. In-service Teacher Education Activities	
i. Observation report of the programme(s)	**30**
3.Sharing of Report on the overall experiences in the TEIs visited	**30**
TOTAL	**100**

FIFTH SEMESTER

PC-7: Contemporary Concerns in Education

Semester-V	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours-64

Objectives:

On completion of the course, the prospective teacher-educator shall:

- *Realize the concerns and challenges in the contemporary school education in India.*
- *Develop insight into the areas of concern in right based education.*
- *Understand the problems in conceptualizing and ensuring quality education.*
- *Acquire comprehensive vision of global concerns in the different areas of current educational scenario.*

Detailed Course Content:

Unit 1: Concerns in School Education

- *Universalization of School Education*: Meaning, dimensions and issues.
- *Common School System*: Concept, needs and challenges, Kothari Commission's recommendations.
- *Equity and Equality in Education*: Different forms of inequity and discriminatory practices in education based on Socio-economic disadvantages (Gender, Caste, Religion) –Characteristics and Concerns; Strategies to address the concerns.
- *Management Concerns*: Public Private Partnership (PPP) mode in school management and its impact on quality of education; Total Quality Management (TQM) of education – Major tenets, processes and limitations.

Unit 2: Rights Based Education

- *Human Rights Education*: Concept, Dimensions, Current status and future challenges
- *Human Right-based Approach to Education*: Millennium Development Goals of Education, Dakar World Declaration of Education for All, Sustainable Development Goals; 4-A Approach to Education for All – Availability, Accessibility, Acceptability, and Adoptability
- Right to Education Act, 2009 and Universalization of Elementary Education- Provisions for access, opportunities and quality for basic education
- Challenges in the implementation of the RTE Act, 2009.

Unit 3: Quality Concerns in Education

- *Quality Education*: Concept; Learner and Learning- centric education.
- *Factors influencing Quality Education*: Quality of Learners, Learning Environment, Content and Learning Materials, Processes of Learning and Teaching, Learning Outcomes.
- *Initiatives and Strategies*: Decentralized planning, Innovative materials and pedagogic practices Capacity building of teachers; Community involvement with reference to their effectiveness and limitations.

- *Use of ICT*: ICT friendly materials and their utilization in classroom transaction, enhancing teacher ability and preparedness, and their attitude towards ICT use; provisions for smart classroom.

Unit 4: Global Concerns in Education

- *Education and Sustainable Development*: Meaning and dimensions, role of Education in facilitating sustainable development; SDG Goals for Education (Goal 4 and its dimensions)
- *Education for a multilingual and multicultural society*; Mother tongue based multilingual education - Issues of transition and quality
- O*pen Education Resources*: Concept, global participation, professional learning communities through OERs, Self and peer evaluation through OERs,
- *Life skill education*: Concept, importance and objectives; Core life skills (WHO); Strategies facilitating life skills; National Skill Development Framework
- *Education in disturbed areas:* Forms of disturbance – natural disaster, conflict, terrorism and insurgency, and their consequences; addressing these issues through education with reference to disaster management; Peace education.

Sessional Work:

Every prospective teacher-educator shall undertake ***any two*** of the following:

- Preparation of a paper on types and quality of school education available in Odisha (either Elementary or Secondary)'
- Observing any two types of schools providing opportunity for disadvantaged learners and developing a paper comparing the facilities and practices in theses schools with main stream schools.
- Case study of a school developed in PPP mode in the state.
- A seminar paper on challenges of implementation of the provisions of the RTE Act for ensuring quality elementary education.
- Developing a scale for assessing the quality of education in an educational institutions clearly defining the indicators of quality education.
- Case study of a multilingual school assessing the effectiveness of the MLE interventions.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

Durru-Bellat, Marie (2004). *Social inequality in school and educational policies*. Paris: International Institute of Educational Planning, UNESCO.

Govt. India. (1992). *National policy on education 1986: Programme of action 1992*. Faridabad: Government of India Press.

Nambissan, G. B., and Srinivasa, R. S. (2014). *Sociology of education in India: Changing contours and emerging concerns*.

Govt. of India (1954). *Report of the Secondary Education Commission* New Delhi: Ministry of Education and Social Welfare.

Department of School Education and Literacy (2011). *Sarva Shiksha Abhiyan: Framework for implementation based on the Right of Children to Free and Compulsory Education Act 2009.*. New Delhi:Ministry of Human Resource and Development.

Govt. of India (2009). *Framework for implementation of Rastriya Madhyamik Shiksha Abhiyan*. New Delhi: Ministry of Human Resource and development.

Govt. of India (1966). *Education and National Development*: *Report of the Education Commission, 1964-66.* New Delhi: Ministry of Human Resource Development.

Kashyap, S. C. (1994). *Our Constitution: An introduction to India's Constitution and Constitutional law*. New Delhi: National Book Trust, India.

Khan, M. I., & Sharma, S. R. (1993). *Equality and education: With special reference to women*. Delhi: Kanishka Publishers Distributors.

Govt. of India (1993). *Learning Without Burden : Report of the National Advisory Committee*. (1993). Ministry of Human Resource Development, Government of India, New Delhi.

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

Naik, J.P.(1977). *Education commission and after*. New Delhi: A.P.H Publishing Corporation

NCERT (1986). School education in India: Present status and future needs, New Delhi: NCERT.

NCERT (2006). National curriculum framework, 2006. New Delhi: NCERT.

Sadgopal, A. (2010). Right to Education vs Right to Education Act. *Social Scientist*, *38*(9/12), 17-50.

Tomasevski, Katarina (2004). *Manual on rights-based education: Global human rights requirements made simple.* Bangkok: UNESCO.

UNESCO & UNICEF (2007). *A human rights-based approach to education.* Paris: UNESCO.

UNESCO (2011). *Contemporary issues in human rights education*. Paris: UNESCO.

UNESCO.(2004). *Education for All: The Quality Imperative*. EFA Global Monitoring Report. Paris.

UNESCO.(2014). *Teaching and learning: Achieving quality for all- . EFA Global Monitoring Report.* Paris: UNESCO.

Unicef (2000). *Defining quality of education.* New York: United Nations Children's Fund.

UNO (2015).*Getting started with the sustainable development goals*. New York: Sustainable Development Solutions Network, United Nations.

UNO (2016). *The sustainable development goals report*. New York: United Nations.

World Bank, (2004). *Reaching the Child: An Integrated Approach to Child Development*.

RTS-2: Advanced Research Methods

Semester-V	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours-64

Objectives:

On completion of this course the prospective teacher-educator shall:

- *Understand the characteristics, forms, utility and limitations of different types of experimental research designs in education*
- *Discriminate non-experimental designs from the experimental designs and differentiate different non-experimental designs in educational research*
- *Use various quantitative and qualitative techniques of data analysis for appropriate analyses of data.*
- *Understand the process involved in synthesizing the results and research reporting.*

Detailed Course Content

Unit 1: Experimental Research Designs

- *Experimental Research*: Key characteristics of experiment - Matching versus Randomization; Types of variables, Control of extraneous variables; Manipulation of the treatment conditions, Outcome measures and group comparisons; Steps in conducting experimental research.
- Threats to internal and external validities;
- Designs of Experimental Research: Purpose and principles, research design as variance control, criteria of research design;
- *Types of Research Design*: Between Group Designs - True experiments (pre- and post-test, post-test only and Solomon four-group), Quasi-experimental Designs (Non-equivalent control group, Time series and Counterbalanced) and Factorial Designs; Within Group Designs - (Repeated measures and Single subject).

Unit 2: Non-experimental Research Designs:

- *Non-Experimental Research*: Concept, Basic differences between experimental and non-experimental research; Self-selection and non-experimental research; Large and smaller scale non-experimental research; Testing alternative hypotheses; Evaluation of non-experimental research – values and limitations.
- *Correlational Designs*: Concept, use and characteristics; Types - Explanatory and Prediction designs; Steps in conducting Correlational research; Evaluation and ethical issues.
- *Survey Designs*: Concept, use and characteristics; Types - Cross-sectional and Longitudinal designs; Steps in conducting survey research; Tools and techniques of survey - Questionnaire and Interviews; Evaluation and ethical issues.
- *Mixed Methods Designs*: Concept, use and characteristics; Types - Convergent Parallel, Explanatory Sequential, Exploratory Sequential and Embedded designs; Steps in conducting Mixed Methods study; Evaluation and ethical issues.

Unit 3: Quantitative and Qualitative Data Analysis

- *Inferential Statistics*: Logic of inferential process, Cause and Effect relation, Single Cause, Multiplicity of Causes; Testing hypothesis- Null or Directional, Qualitative & Statistical Difference and Relationship Testing; Testing significance of Difference between Means and other Statistics, t-test,
- *Analysis of variance*: Assumptions, Computation of the F-ratio, ANOVA involving one and two factors, ANCOVA (simple treatments only);
- *Non-parametric tests of Significance*: Chi- Square Test, Median Test, Sign Test, and Mann Whitney U-test;
- *Qualitative Data Collection*: Process - Observation, Interviews, Documents, Audio-visual materials; Tools for collecting qualitative data – Observation schedules, Interview schedules, Check lists ; Steps in qualitative data collection; Validity and reliability of qualitative data.
- *Techniques of Qualitative Data Analysis*: Content Analysis, Classification, Categorization, Triangulation, Frequency and Percentage Analysis, Trend Analysis, Utilization of Corroborative evidences;
- Utilizing Software Packages for quantitative analysis (Use of SPSS, MS Stats, MS Excel) and qualitative analysis (Use of Anthropack, AltraVista etc.)

Unit 4: Writing of Research Report & Synthesizing Research

- Writing of Research Report: Types of reports - Empirical Studies, Literature Reviews, Theoretical Articles, Methodological Articles, Case Studies, other types; Manuscript Structure and Content
- Mechanics of Reporting: Organization - Chapters/Sections, Length, Headings and sub-headings, Seriation; Writing Style - Continuity in Presentation of Ideas, Economy of expression, Precision and clarity, Linguistic devices. Crediting Sources – Importance, Direct quotations, online materials, Citing references in text; Styles of writing Bibliography and References; APA Publication Styles.
- Ethical considerations in quantitative and qualitative research: Accuracy, credibility, confidentiality, transparency, honesty, originality, protecting authenticity against plagiarism.

Sessional Work:

Every prospective teacher-educator shall undertake *any two* of the following:

- Prepare a research proposal using any one of the experimental designs stating the appropriate quantitative analysis to be used in the experiment.
- Develop a seminar paper on non-experimental designs of research in education.
- Prepare a paper comparing relative advantages and limitations of quantitative data analysis
- Conduct content analysis on any selected educational article and prepare a report.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

American Psychological Association (2010). *Publication manual of the American Psychological Association* (6th Edn.). Washington,DC: American Psychological Association

Best, J.W., & Kahn, J.V. (2009). *Research in education.* New Delhi: Prentice Hall of India Pvt. Ltd.

Creswell, J.W. (2011). *Educational research : Planning, conducting, and evaluating, quantitative and qualitative research*. New Delhi : PHI learning Pvt. Ltd.

Flick, U. (2012). *An introduction to qualitative research.* London: Sage Publication.

Fox, D.J. (1969).*The Research process in education.* New York: Holt Rinchart and winstoninc.

Gay, L.R., Mills, G.E., and Airasian, P. (2009). *Educatinal research. competencies for analysis and applications.* New Jersy: Merrill and Pearson.

Keeves, J. P. (Ed.) (1990).*Educational research methodology and measurement: An international handbook.* New York: Pargamon Press.

Kerlinger, Fred N., Lee, Howard B. (2000). *Foundations of behavioural research.* New York: Thomson Learning.

Lichmen, M (2006). *Qualitative research in education*. London: Sage Publication

Lovell, K., and Lawson, K.S. (1970).*Understanding research in education.* London : University of London.

Singh, K.(2001).*Methodology and techniques of social research.* New Delhi: Kanishka publishers.

Travers, R.M.(1969).*Introduction to educational research.* London: Macmillan Publishing co.

Wiersma, W. (2000). *Research methods in education*. New York: Allyn Bacon.

Theme-based Specialization

TS-1:Educational Management and Leadership

P.1 : Educational Management

Semester-V	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours-64

Objectives:

On completion of this course, the prospective teacher-educator shall:

- *Explain the concept, principles, processes and techniques of educational management.*
- *Describe the structural framework of education at the central and the state levels.*
- *State the policies and processes of educational management adopted after NPE 86*
- *Apply the concepts, techniques and process of educational management in school situation*
- *Specify the resources and the process resource management*

Detailed Course Content:

Unit 1: Introduction to Educational Management

- Meaning, importance, nature and principles
- Educational Management Vrs Educational Administration and Educational Governance
- Forms of Educational Management (in terms of objectives and functions): Democratic and Authoritarian, Centralized and Decentralized
- Functions : Institutional efficiency and effectiveness; operational autonomy and flexibility; effective decision-making; ensuring performance standards and accountability; exercising control and authority; strengthening monitoring mechanism; promoting research and development

Unit 2: Educational Management: Structure and Functions

- National Level : MHRD and various Departments, CABE, NCERT, NUEPA, NCTE
- State Level : Education Departments, Directorates and other specialized structures – OPEPA, OMSM, ELTI, BSE, SIEMAT, SRC, NKC Centre for Development Studies, Gopabandhu Academy of Administration and Madhusudan Accounts Training Institution
- District Level : Zilla Parisad and District Planning Board, DEO, DIETs,
- Sub-district Level : BEO, Gram Panchayats, CRCs
- Grassroots Level Institution, SMC / SMDC, Community

Unit 3: Institution-Based Management

- Institution-Based Management : Concept, importance and characteristics
- Processes : Need identification and prioritization, Augmentation of available resources, Planning, Implementation, Monitoring and Feedback, Revision and Finalization
- Role of different stakeholders in institution-based management
- Issues and Strategies

Unit 4: Management of Resources

- Resource and their Types: Human, Material, Financial and Time as Resources.
- Human Resource Management: Personnel management; Selection Recruitment, Induction and Training; Staff development; Performance Appraisal.
- Management of Physical Resources: Types of Physical Resource and their management.
- Financial Management: Resource mobilization- source and mode, Utilization of resources- types (recurring and non-recurring, plan and non-plan)
- Office Management: Meetings – Objectives, types of meetings, planning for a meeting, meeting agenda, minutes of meeting, management of records.

Sessional Work:

Every prospective teacher-educator shall undertake ***any two*** of the following:

- Prepare a paper on efforts of the central and state government of Odisha for reformation in educational management
- An analysis of the functioning of any DIET of your state towards the development of school education.
- Preparation of a paper on the Impact of Decentralization on Educational Management for seminar presentation
- Develop a plan for performance appraisal of academic staff for improving quality of instruction

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

Anthony, N.F. (1981) *Management competencies and Incompetence's* Canada: Addison Wesley Publishing Company, Inc.

Arnole, H.J and Feldman, D.C. (1988*) Organizational Behaviour*, New York: McGraw – Hill Book Company

Azad,J.L. (1973) Educational Financing in India, New Delhi. Sterling Publishers,.

Blaug, Mark(1972): *An Instruction to Economics of Education.* Allen Lane

Burton, W.H. and Brueckner, L.J (1955) *Supervision – A Social Process*, U.S.A Appleton –Century Crofts, Inc.

Desai , D and Other (1970) *School management and change*, Baroda: M.S University.

Drucnker, F.B (1985) Management – Tasks, Responsibilities and Practices, New Delhi: Allied Publishers Pvt. Ltd.

Eric, H. and McMohan, A. (eds) (1986) The Management of Schools, London: Kogan Page.

Etziono, A. (1972). *Modern organisation*, New Jersey: Prentice Hall Inc. Eye, G.G and

Flippo, E.B (1884) *Personnel Management*. New York: McGraw Hill, Inc.

Hersey, P. and Blanchard, K.E (1978) *Management of Organizational Behavior*, New Delhi: Prentice Hall of India.

Kast and Rosenweig (1974) *Organizational and Management Systems Approach*, Tokyo McGraw Hill.

Khanna, S.S (2000) *Organizational Behavior*, New Delhi: Chand and Company

NIEPA. (1986). *Educational management in India*. New Delhi: NIEPA,.

Padmanabham, C.B.(1998). *Educational financing and structural adjustment policies in India*. Delhi: Common Wealth.

Pareek, H., Rao, T.V and Pestonjee, D.M (1981) *Behavioral process in organization*, New Delhi: Oxford and B.M Publishing Co.

Prasad, L.M. (2001) *Principles and practice of management*, New Delhi: Sultan Chand and Sons.

Rao V.K.R.V. (1961). *Education and human resource development.* New Delhi: Applied Publishers.

Scalan, B. and Keys, D. (1983) *Management and organizational behavior*, New York: John Wiley and Son.

Sharma, M. (1986) *Systems approach: Its application in education*, Bombay: Himalaya Publishing House.

Shein, E (1974) *Organizational Psychology*, New Jersey: Prentice Hall of India Pvt. Ltd.

Stoner, J.A.F. and Wankel, S. (1987) *Management*. New Delhi: Prentice Hall of India.

Singh, B. (ed)(1967). *Education as investment*, Delhi: Meenakshi Prakashan.

Sri Prakash, (1994). *Expenditures on education.* New Delhi: NIEPA.

Strauss, G. and Sayles, L.R. (1985) *Personnel: The human problems of management*. New Delhi: Prentice Hall of India.

Tripathi, P.C., and Sayles, L.R. (1991) *Principles of management*, New Delhi: Tata McGraw Hill.

Theme-based Specialization

TS-2: Educational Policy and Planning

P.1 : Educational Policy

Semester-V	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours- 64

Objectives:

On completion of the course, the prospective teacher-educator shall:

- *Explain the importance of developing a policy in education,*
- *Relate the policy with the existing education scenario.*
- *Appreciate the roles of various bodies in structuring educational policy.*
- *Critically look into the educational policies in India.*
- *Address positively to the policy challenges in education.*

Detailed Course Content:

Unit 1: Formulation of Education Policy

- Policy: concept, importance and characteristics; Process of policy making; methods and approaches in developing policy.
- Educational policy: Meaning, need and objectives.
- Major considerations in developing education policy: social, cultural, political and economic
- Policy making bodies in Education: MHRD, CABE, UGC, NCERT, NUEPA, NCTE, State Education Departments, and SCERTs
- Role of educational policies with reference to structure, curriculum (content and pedagogy), management of school and teacher

Unit 2: Implementation of Education Policies.

- Role of various national bodies in Policy implementation: MHRD, NCERT, NUEPA, NCTE
- State level bodies in policy implementation: State Education Departments and Directorates, SCERTs, TEIs
- Monitoring Policy Implementation: MHRD, UGC, NAAC, NCTE
- Issues and concerns in policy formulation in respect of school and teacher education
- Issues in policy implementation in respect of school and teacher education

Unit 3: Educational Policies in India

- Significance of National Policy on Education in education system of India
- National Policies on Education: NPEs of 1968, 1986/92, and POA-1992 with reference to the provisions therein.
- Contributions of NPEs to School Education and Teacher Education
- NPE with reference to socio – cultural – economic contexts of India and envisioning future education policy

Unit 4: Understanding Policy Challenges in Education

- Challenges of Universalisation of Elementary Education (National Policy on Education, 1986)
- Challenges of Universalisation of Secondary Education.
- Challenges of quality and regulation in higher Education.
- Rights and Entitlements under the Right to Education ACT 2009

Sessional Work;

Every prospective teacher-educator shall undertake ***any two*** of the following:.

- Preparation of a paper on the needs process of developing a state policy on education and present it in a seminar.
- Developing a paper on the modalities of developing the National Policy on Education, 1986.
- Develop an analytical essay on comparing the major areas of focus in the NPEs of 1968 and 1986.
- Preparation of a grid comprising the roles of different organizations at the state and national level in developing a policy in education.
- Preparation of a data based analysis on the role of the NPE 1986 in the development of UEE .

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

Batra, Sunil (2003). School inspection to school support. In Neelam Sood (ed) *Management of school education in India*, Delhi:NUEPA.

Jha, Praveen , Das, Subrat, Mohanty, S. S., Jha, N. K. (2008). *Public provisioning for elementary education in India*. New Delhi: Sage.

MHRD (2011). *Sarva Shiksha Abhiyan: Framework for Implementation based on the Right to Free and Compulsory Education Act, 2009*. New Delhi:Department of School Education and Literacy.

NCERT(2006). *Educational satistics of India*. New Delhi: NCERT.

NUEPA (2008). *Elementary education in india: Progress towards UEE*, DISE data 2006-07

Patnaik, P. (2007). *Alternative perspectives on higher education in context of globalization.* at http://www.nuepa.org/ Download/ FirstFoundationdaySpeech.pdf

Pratichi India Trust (2009). *The Pratichi Education Report II: Primary Education in West Bengal:Changes and Challenges.*

PROBE Team (1999). *Public report on basic education in India*, and *PROBE Revisited* (2011). New Delhi: Oxford University Press.

Raina, V (2007) Integrating work and education: Contemporary education dialogue (Vol 4:1), pp72-87.

Tilak J B (2004). *Higher Education between State and the Market* presented in UNESCO Forum on Higher Education available at portal.unesco.org/education/tilak/colloquium.

Theme-based Specialization

TS-3: ICT in Education

P.1 : Foundations of Educational Technology

Semester-V	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours- 64

Objectives:

On completion of this course, the prospective teacher-educator shall:

- *Differentiate various terminologies associated with educational technology*
- *Appreciate the emergence and evolution of various educational media*
- *Explain various approaches to educational technology*
- *Describe the integration of technology for pedagogy, assessment, administration and Continuing Professional Development (CPD)*
- *Analyse and apply principles and practices associated with technology enhanced learning*
- *Critically evaluate ICT related policies and plans*
- *Assess various problems and issues related to information and communication technologies and its integration in education*

Detailed Course Content:

Unit 1: Historical and Conceptual Basis

- Meaning and nature of Educational technology, Instructional technology,Information and communication technology Definitions, scope, functions/objectives of educational technology; Approaches to educational technology - Physical science (media approach), Communication (audio visual approach) , Cybernetics (system approach)
- Behaviouristic Approach: Programmed instruction and teaching machines, individualized approach to instruction – Keller plan & IPI, Computer assisted instruction
- Cognitive Approach: Information processing model, information theory, simulation, artificial intelligence, computer based instruction
- Instructional design approach – task analysis, instructional design theories – Gagne, Bruner, constructivist approach, discovery, inquiry

Unit 2: Instructional/Learning Design & Models and Process

- Instructional Design: Meaning and Need; Implication of learning theories for instructional design
- Theory of multiple intelligences and its implications for instructional design; Developing a personal learning theory; Types of Learning and learning styles
- Instructional Design Models: ADDIE Model, System model, ASSURE Model and ARCS Model
- Instructional Design Process in ADDIE: Analysis- need, target, task, and topic/content; Design- define objectives, sequencing, instructional methods, delivery strategies, evaluation strategies; Develop- content, story board,courseware, authoring tools and interactivity, and interface; Implement – installation, deliver and distribution, managing learner activities; Evaluation – purpose, models of evaluation, evaluating reaction, learning, behaviour, result.

Unit 3: Integration of ICT in Education

- Characteristics of digital learners
- Need and importance of digital Literacy
- ICT: Relationship between ICT, culture and learning
- Technology and pedagogy: Techno pedagogical content knowledge (TPCK); Open Source Software and Management; Approaches and strategies to integrating ICT in teaching and learning; ICT and Universal design for Learning (UDL)-multiple means of providing learning experience, multi means of representing learning, multiple means of engaging learners
- Technology and assessment: Electronic assessment portfolio – concept, types, e-portfolio tools –Mahara; Technology assisted continuous assessment: role of LMS; Online and offline assessment tools – rubrics, survey tools, puzzle makers, test generators, reflective journal, question bank; Learning analytics and feedback

Unit 4: Technology Integration: Policies and Trend

- Emerging Trends: Increased online access and connectivity, Mobile access- ubiquitous computing, Free and Open Source Software (FOSS), Convergence of Hardware and software, Technological sophistication and affordability, Digital assistive technologies.
- Problems and Issues: Equity issues and the digital divide Social; ethical, and security issues; Limitations of technology integration; the impact of technology integration; Technology dependence and learner autonomy.
- ICT Plans/schemes, policies, curriculum and standards;
- New initiatives: Digital India; e-basta; e-Pathasala; e-pg-pathasala; e-library; NROER; Vikaspaedia
- Current and Future Trends: Emerging role for augmented and virtual reality in education; Learning analytics and education; Personalized learning spaces; Digital badging and games; BYOD and digital citizenship; 3D printing and its educational application;

Sessional Work:

Every prospective teacher-educator shall undertake ***any two*** of the following:

- Seminar presentation on approaches to educational technology.
- Seminar presentation on Evolution of Educational Media.
- Evaluating multimedia CD ROMs using standard criteria and study the multimedia evaluation reports available at www.teem.org.uk/
- Comparative study of ICT syllabus of school education and teacher education of various organizations.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

Andrew M. St. Laurent. (2004).*Understanding Open Source and Free Software Licensing*. Oreilly: Cambridge

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

Evant, M: The International Encyclopaedia of Educational Technology.

Gwen Solomon, Lynne Schrum. (2014). *Web 2.0 How-to for Educators* (2nd Edn.). ISTE.

Govt. of India (2004, 2010). *ICT@schools scheme*. New Dehi: Ministry of Human Resource Development.

Govt. of India (2012). *National ICT policy for school education in India.* New Dehi: Ministry of Human Resource Development (URL*: ictschools.gov.in)*

Govt. of India (2014). *State report cards on ICT implementation*. New Dehi: Ministry of Human Resource Development (URL: MHRD.gov.in).

Howard Pitler, Elizabeth R. Hubbell, and Matt Kuhn. (2012).*Using Technology with ClassroomInstruction That Works* (2nd Edn.). Denver: ASCD.

Jane Hunter (2015).Technology Integration and High Possibility Classrooms: Building from TPACK

Katherine Cennamo, John Ross, Peggy Ertmer. (2013).Technology Integration for Meaningful Classroom Use: A Standards-Based Approach. AU:Wadsworth.

Kumar, K.L.(2010). *Educational technology*. New Delhi: New Age India Ltd.

W.J. Pelgrum and N. Law (2003). *ICT in education around the world-Trends, problems and prospects*. UNESCO: Paris

Theme-based Specialization

TS-4: Environment Education

P.1 : Environmental Awareness

Semester-V	Credit-4
Marks 100 (Ext.70+Int.30)	**Contact Hours- 64**

Objectives:

On completion of this course the prospective teacher-educator shall:

- *explain the causes for environmental hazards and pollution*
- *elaborate the causes for environmental degradation*
- *appreciate the steps taken to protect the environment in daily life and*
- *encourage the learners for being proactive for protection of environment*
- *analyze the environmental issues and policies in India*
- *appreciate the international efforts for protection of global environment*

Detailed Course Content:

Unit 1: Understanding Environmental Challenges

- Environment: Meaning, importance (man and environment relationship), components (biotic, abiotic)
- Global Environmental Problems: Major problems (pollution and degradation related) and their typescauses (natural and man-made), effects with reference to developing countries, Climate change, global warming, ozone depletion, acid rain, el-nino, season change, deforestation, greenhouse effect,
- Types of Environmental Pollution: Air/atmosphere, water/marine, sound, soil; Causes – Physical, natural, industrial, human behavior, population, nuclear, thermal; Prevention and corrective measure
- Types of Environmental Degradation – soil erosion, land slide; Causes, prevention and corrective measures

Unit 2: Global Concerns for Environment Safety and Protection

- UN Conference on Human Environment (Stockholm Conference)
- Nairobi Conference, 1982
- Bruntland Conference, 1983
- Earth Summit, 1992 at Rio: Features of Rio Declaration, Major achievements
- UN Convention on Climate Change
- Provisions in the MDGs and SDGs

Unit 3: Environment Movements in India- Policies and Programmes

- Environmental movements: Silent Valley Movement, Chipko Movement, Narmada Bachao Andolon, Movement against Tehri Dam Construction, Niyamgiri Movement
- Acts and Policies: Environment (Protection)Act,1986; National Environment Tribunal Act, 1995; National Environmental Policy,2006, Wild Life Act, 1972; The Air (Prevention and Pollution) Act,1981; , Water Act 1974,
- Provisions and Programmes for Environment Protection under Five Year Plans

Unit 4: Environment Management

- Environment Management: Concept, need and objectives
- Dimensions of Environment Management:
- Measures for conservation of flora and fauna, conservation of non-renewable resources
- Protection of environment, preventive measures

Sessional Work:

Every prospective teacher-educator shall undertake ***any two*** of the following:

- Preparation of a report on environmental crises and their causes in the context of Odisha
- Conducting a survey on environmental pollution of any one locality
- Preparation of a report on the initiatives taken in the country for environmental impact assessement
- Preparation of a paper on the important features of Rio Declaration and its major achievements.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

Agarwal, S.P. and Aggarwal, J.C. (1996). *Environmental Protection, Education and Development*. New Delhi: New Concepts.

Joy, P., & Neal, P. (1994). *The handbook of environmental education*. London: New Fetter Lane.

Kelu, P. (2000). *Environmental education: A conceptual analysis*. Calicut: Calicut University.

Kumar, A. (2009). *A text book of environmental science*. New Delhi: APH Publishing Meerut: R.Lall Books Depot. Publications.

Reddy, P. K., & Reddy, N. D. (2001). Environmental Education. Hyerabad: Neelkamal

Sharma, B. L., & Maheswari, B. K. (2008). Education for Environmental and Human value.

Sharma, R. A. (2008). *Environmental education*. Meerut: R.Lall Books.

Sharma, R. G. (1986). *Environmental education*. New Delhi : Metropolitan Book

Sharma, V. S. (2005). *Environmental education*. New Delhi: Anmol publication.

Singh,Y. K. (2009). *Teaching of environmental science*. New Delhi: APH Publishing.

Theme-Based Specialization

TS-5: Guidance and Counselling

P.1 : Guidance and Counselling Services in Schools

Semester-V	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours- 64

Objectives:

On completion of this course, the prospective teacher-educator shall:

- *Understand the need, objectives and scope of guidance*
- *Appreciate the role of guidance programme in schooling system*
- *Develop acquaintance with different techniques of group guidance*
- *Recognize the role of guidance in attaining the goals of education*
- *Understand the process of assessment for guidance and counselling in schools*
- *Aware of the contribution, role and function of the school guidance committee*
- *Justify effective planning and organization of guidance programmes in schools*

Detailed Course Content:

Unit 1: Guidance, Education and Curriculum

- Guidance: need, scope, principles
- Relation of guidance with education; integration of guidance and curriculum:
- Importance of guidance at various levels of schooling
- Types of guidance programme – socio-personal, educational and vocational: aims and objectives at different stages of schooling and group guidance techniques
- Relationship between guidance and counselling

Unit 2: Essential Services in Guidance Programme

- Types of guidance services: Orientation, Information services, Student appraisal and Individual Inventory, Counselling, Referral, Placement and Follow-up
- Types and sources of information
- Methods of dissemination of information
- Significance of Research & Evaluation in guidance programme
- Conditions essential for planning and organization of guidance programmes in schools
- Resources for organizing guidance services

Unit 3: **Assessment for Guidance and Counselling**

- Importance of assessment in guidance and counselling
- Tools and techniques of psychological testing
- Non-testing techniques: observation and interview,; sources of information: anecdotal record, cumulative record, academic reports, , sociometry and portfolio assessment
- Integration of information from different sources

Unit 4: Guidance for students with special abilities and Needs

- Students with special abilities and needs-concept and identification process
- Guidance for students who are gifted and creative
- Guidance for socially and economically disadvantaged and delinquent students
- Guidance for students with physical impairment
- Guidance for students cognitive impairment
- School guidance committee: constitution, roles and functions
- Role of teachers, administrators parents and other personnel of the community

Sessional Work

Every prospective teacher-educator shall undertake ***any two*** of the following:

- Conduct a survey of the problems that are most prevalent in schools, which need immediate attention of a guidance counselor and prepare a brief report
- Prepare a detailed outline of a class talk on need for guidance services in schools
- Prepare a list of resources required for setting up a guidance-oriented curriculum.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings

Anand, S.P (2007). *Guidance in school*. Bhubaneswar: Global Printers,

Bhatnagar, Asha and Gupta, Nirmala(Eds.) (1999). *Guidance and counselling: A theoretical prospective* (Vols.I & II). New Delhi: Vikas.

Brown, D. and Brook L.,(Eds).(1990). *Career choice and development*. San Francisco: Jossey Bass.

Gibson, R.L. and Mitchell, M.H. (1986). Introduction to guidance. New York: Macmillan.

Gladding, Samuel T. (1996). Counselling: A comprehensive profession, Prentice Hall Inc. of India.

Nayak, A.K. (1997). *Guidance and counsel*ling. New Delhi. APH Publishing House.

Sharma, R.N. and Rachana Sharma(2004). *Guidance and counselling in India*. New Delhi: Atlantic Publishers and Distributors.

Theme-based Specialization

TS-6: Pre-school Education

P.1 : Pre-School Education

Semester-V	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours- 64

Objectives:

On completion of this course the prospective teacher educators shall:

- *Understand the need and significance of pre-school education*
- *Understand the policy perspectives on pre-school education in India and world*
- *Appreciate the co-existence of plurality and diversity of childhood in contemporary Indian society*

- *Understand the linkage between pre-school and primary education*
- *Critically examine the contribution of educationists on pre-school education*
- *Reflect on the strategies of assessment of children at pre-school Stage*
- *Develop strategies for developmentally appropriate practices*

Detailed Course Content:

Unit 1: Pre-School Education: Policy and Perspectives

- Concept, significance and objectives of Pre-school education; ECCE, ECE, ECCD
- ECE in India: Policies and Programmes in National Policy on Education (NPE, 1986) and POA (1992), National Plan of Action for Children, 1992 and 2005; National Curriculum Framework (2005); Quality Standards of ECCE (MW&CD)-2013, Constitutional Provisions (Revised Art.45)
- ECE in Global Perspective: United Nations Convention on Rights of the Child (UNCRC, 1989), Millennium Development Goals (2000) and Global Monitoring Report (UNESCO) 2007 focusing on ECCE – concerns and issues
- Right to Education Act, 2009, emerging positions of early childhood and the young child in the current five year plan

Unit 2: Contributions of thinkers and educationists on Pre-school Education

- Contributions of Indian Educationists to Pre School Education – (Mahatma Gandhi, Rabindranath Tagore, Gijubai Badheka, TarabaiModak)
- Contributions of western Educationists to Pre School Education – (Friedrich Froebel, Maria Montessori, Jean Piaget)

Unit 3: Linkage between ECE and Primary Education

- Concept,Importance of linkage between ECE and Primary school
- Strategies of linkages:Location,Programme and curricular and management
- Pressures on Pre-schoolers.Organisation of school Readiness programme

Unit 4: Curriculum and Pedagogy for Early Childhood Education

- Curriculum for School Readiness – physical, cognitive, socio-emotional dimensions; characteristics of learning experiences and approaches
- Developmentally appropriate practices: theme-based, holistic, joyful, inclusive – meaning, rationale and practical implications in specific contexts; story-telling, puppetry, musical and rhythmic exercises, dramatization, role-play, art activities, indoor and outdoor play, field trips and explorations as methods in primary and early primary stages – meaning, rationale, selection criteria, method of transaction
- Local specific community resources – human and material & their integration in curricular activities; preparation & use of learning and play materials.

Sessional Work

Every prospective teacher-educator shall undertake ***any two*** of the following::

- Case study of Anganwadi/ pre-school centers
- Study of present status of ECCE in State/Region/District
- Collection of information on infrastructure of ECCE centers and comparison with NCERT minimum specifications (1992)
- Reflection on literature on equality ECCE services of one western country (internet, journals)
- Writing of journal articles on different issues on ECCE

- Survey of play materials and comparing with the socio-cultural set-up
- Survey of child rearing practices in different cultures

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

Aggarwal, J.C. and Gupta, S. (2007). Early Childhood Care and Education (Ist Ed.). Shipra Publications, New Delhi.

Economic and Political Weekly (2006). Child Development – Overcoming Persistent Under-Nutrition. XLI (12), March 25-31, New Delhi: A Sameeksha Trust Publication.

Government of India (1986). National Policy on Education, Department of Education, New Delhi.

Govt. of India (2005). National Plan of Action for Children, 2005: Department of Women and Child Development, New Delhi

Mishra, R.C. (2005). Early Childhood Education Today, Prentice Hall Publisher

MWCD (2013).National Early Childhood Care and Education (ECCE) Policy.Govt of India, New Delhi

MWCD (2013).National ECCE Curriculum Framework.Govt of India, New Delhi

MWCD (2013).Quality Standards of ECCE.Govt of India, New Delhi

Myers, R. G (1995). The Twelve Who Survive: Strengthening Programmes of Early Childhood Development in the Third World, Ypsilanti, Mich., High/ Scope press.

National Council of Applied Economic Research (2001). Concurrent Evaluation of ICDS -National Report. New Delhi.

NCERT (2005). Position Paper of the National Focus Group on Early Childhood Education, NCERT, New Delhi.

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

NCERT (2005).Position Paper on National Focus Group on ECE, NCERT, New Delhi

NCERT (2015).Exemplar Guidelines for Implementation of Early Childhood Care and Education Curriculum, NCERT, New Delhi

Pugh, G. (1996). Contemporary Issues in Early Years: Working Collaboratively for Children (2nd Ed.) National Children's Bureau, London.

Seefeldt, Carol (1990). Continuing Issues in Early Childhood Education, Merrill Publishing Company, Columbus, Ohio.

Sood, N (2003). Planning and Management of Early Childhood Education: A Case of Himachal Pradesh. Occasional Paper 32, New Delhi: National Institute of Educational Planning and Administration.

Swaminathan, M. and Daniel, P. (2000). Activity-based Developmentally Appropriate Curriculum for Young Children, Indian Association for Pre-school Education, Chennai.

Swaminathan, Mina (1998). The First Five Years: A Critical Perspective on Early Childhood Care and Education in India.

UNESCO (2002). Integrating Early Childhood into Education: the Case of Sweden. Paris,(UNESCO Policy Brief on Early Childhood, 3).

UNESCO (2006). Cross-national Compilation of National ECCE Profiles. Geneva:UNESCO International Bureau of Education.

UNESCO (2007). Strong Foundations: Early Childhood Care and Education, Paris, UNESCO.

UNESCO (2007): Strong Foundations: Early Childhood Care and education. Paris.

World Bank (2004). Reaching Out to the Child: An Integrated Approach to Child Development. New Delhi, Oxford University Press.

World Bank (2007). EFA Global Monitoring Report – Early Childhood Care and Education. Washington D. C. World Bank.

RTS Pr.-1 : Dissertation (Part-III)

Semester-V	Credit-2
Marks 50 (Internal)	Contact Hours- 64

Objectives:

On completion of the course in this semester, the prospective teacher educator shall

- *Complete data collection*
- *Conduct data analysis*
- *Interpret the result*

Activities:

The activities concerned with the dissertation work in this semester have been divided into three parts: Data Collection, Data Analysis, and Data Interpretation, Discussion and Drawing Conclusion.

Criteria of Assessment:

The distribution of marks on the three activities is as follows:

Activity	Marks
1.Data Collection	20
2.Data Analysis	15
3.Data Interpretation, Discussion and Drawing Conclusions	15
TOTAL	**50**

The faculties of the Teacher Education Institutions along with the Supervisors / Mentors concerned shall assess the performance of the Teacher Educators in the aforesaid aspects out of the suggested marks and award the consensus mark out of 100 marks to each Prospective Teacher Educator in this regard.

While assessing the dissertation at the pre-submission stage the following aspects are to be examined.

- *Logical organization of the chapters and sub-chapters*
- *Approved reporting format and style*
- *Approved letter font used*
- *Approved style of preparing references*

- *Systematic arrangement of Appendices*
- *Appropriate and sequential presentation of graphs and charts in the dissertation*

However, any alternative appropriate procedure of such assessment may also be devised at the institution level and adopted for the purpose.

PSS Pr.-III : School Internship-III
Classroom Transaction and Related Activities (Contd.)

Semester-V	Credit-4
Marks 100 (Internal)	Contact - 6 weeks

The major thrust of the school internship programme, among other closely related activities like school exposure and exposure to multi-cultural contexts in schools, is to broaden the visions and improving the performance capabilities of the prospective teacher-educator on the classroom transactions to enhance the quality of teaching-learning process. While engaged in improving the classroom performance as a teacher, the prospective teacher-educator needs to be efficient in several related activities like planning the academic activities for one academic session, preparation of lesson plans on a regular basis, developing, collecting and managing resources (materials, activities and human) for teaching and learning in and out of classroom. Besides developing these abilities as professional teachers, these activities during this part of the school internship are intended to prepare prospective teacher-educators for mentoring the student-teachers in their basic roles as effective classroom teachers.

Objectives:
After completion of this course, the prospective teacher-educator shall:

- *Develop professional capabilities and sensibilities as an effective teacher and maintain sustained engagement with learners and teachers of schools.*
- *Acquire required skills and competencies to cater to diverse needs of the learners in schools*
- *Apply the theoretical understanding developed through various perspective and pedagogic courses in the actual classroom practices for enhancing quality of teaching and learning.*
- *Internalize the role of a teacher and a teacher-educator – as a facilitator of learning, classroom manager, resource mobilizer and manager, innovator, evaluator of learner performance, planner and organizer of other curricular activities, mentor and counselor for children and practicing teachers, developer and evaluator of curriculum text books and other TLMs etc.*

Organization
The activities during this internship programme shall be conducted in three phases as follows:

IV. Preparatory Activities,
V. Activities during Classroom Transaction,
   c. Teaching-Learning Activities
   d. Other Related Activities
VI. Follow up Activities.

IV. Preparatory Activities

Prior to conduct of teaching-learning activities in the classroom, the following preparatory activities shall be completed:

- Orientation of the prospective teacher-educators,
- Sharing meeting with the teachers and headmasters of the cooperating schools in the institution and working out the programme details for the internship
- Demonstration lessons by the faculty members followed by post-demonstration discussion
- Criticism lessons by the student-teachers(one lesson by each student-teacher in any one of the methods opted) under the supervisory support of the method teachers, attended by all prospective teacher-educators of the method concerned
- Placement of prospective teacher-educators in cooperating schools for internship activities.

V. Classroom Transaction Activities

Each prospective-teacher educator shall have to perform two categories of interrelated activities in the classroom and school: Teaching-learning activity as per the time table of the school, and other related activities for facilitating learning.

c. Teaching-Learning Activities

- Preparation of lesson plans along with the required TLMs by the prospective teacher-educator in his/her concerned pedagogy subject for conducting teaching-learning transactions with the students of the allotted class.
- Delivery of practice lessons by the prospective teacher-educator with supervisory support and feedback from faculty members. Each shall deliver 20 lessons in the concerned school subject he/she offers, excluding the criticism lesson. Out of these 20 lessons, 30% (6 nos.) shall be delivered in the upper primary classes (Classes VI to VIII) and the remaining 70 % (14 nos.) lessons in the secondary classes (Classes IX and X).
- Observation of five peer-lessons and recording of the performance with authentication by the concerned supervisors.
- Feedback session in the Teacher Education Institution after each spell of ten-day practice teaching to be attended by all prospective teacher-educators for sharing their experiences.

d. Other Related Activities

Activities related to promote learning like the ones indicated below shall be conducted by each prospective- teacher educator: Each has to perform ***at least 04 (four) activities*** including the items marked by '**'.

- Preparing scheme of lessons in the subject teaching in the class**
- Preparation of TLMs, Learning Activities and model test items**
- Preparation of wall magazine/news bulletins
- Participating in classroom beautification activities
- Taking arrangement classes when required
- Organizing and participating in school literary and recreational activities
- Conducting quizzes, debates song and drawing competitions in the classroom

- Organizing of and participating in science exhibition, science fair, science club/nature study club/eco club activities, Mathematics Exhibitions, Art and Craft exhibitions etc.
- Innovative teaching- learning activities

VI. Follow up Activities

- Presentation of innovative and creative work done by the prospective-teacher educator during internship.
- Suggestions and feedback from the teachers and Heads of the cooperating schools for further improvement of the internship activities
- Sharing of prospective-teacher educators' internship experiences in the institution and their feedback on overall organization of internship programme for future action.

Attendance

- The minimum attendance of each student-teacher for school internship programme shall be 90%

Assessment of Internship Performance

The classroom transaction activities and the follow up activities shall be assessed internally as per the following criteria.

Criteria for Assessment of Internship and Records

Activities	Marks
1. Assessment of classroom teaching and other school activities rated by the headmaster and the teachers of the school.	20
2. Assessment of Lesson Plan Record	15
3. Peer assessment of the lessons	10
4. Assessment of lessons delivered as per the plan by the faculty members	25
5. Assessment of other related activities (5× 4)	20
6.Presentation and participation in follow up activities	10
TOTAL	**100**

Each Teacher Education Institution shall prepare a detailed plan on school internship programme for Classroom Transaction and Related Activities in consideration of the activities indicated above sufficiently in advance of commencement of the activities.

The assessment, which is entirely internal, may be conducted preferably by a team of faculty members specifically designated for the purpose.

TS Pr.-1 : Theme Area Practicum

Semester-V	Credit-2
Marks 50 (25+25) (Internal)	**Contact Hours- 64**

Rationale:

The prospective teacher educators' needs to realistically understand the policies, practices and issues associated with the theme based specializations of their choice in the real field/institutional context. For this, they need to have direct situational experience and sharpen their understanding of the theoretical knowledge acquired from their area of specializations. This course is designed in keeping with the above rationale and with an intention to help students integrate theory and practice.

Objectives:

On completion of this course, the prospective teacher educator shall:

- *Acquaint himself/herself with the activity/programme related to their theme based specialization.*
- *Develop insight into the actual functioning of the elements acquired in the areas of specialization through direct observation and experience in the areas of action.*

Organization:

The practicum shall be organized by attaching the prospective teacher educators to different schools/teacher education institutions, computer laboratories and other agencies engaged with activities related to the theme based specialization with a view to study issues in real context.

Each prospective teacher educator has to choose one issue related to each paper of his/her theme specialization for this practicum. Thus, ***during the 5th Semester***, ***one has to complete theme specific practicum on two issues***, selecting one from each of the two themes of specialization under the guidance and active supervision of a teacher educator/practitioner.
Necessary orientation to students shall be provided before organizing the activities.

Programme for Conducting Practicum

Programme for one thematic issue (tentative)

i. Orientation for the programme:	To be done during the classroom interaction in the respective theme specialization course.
iii. Visit to the Practicum Site and preparation of the report:	One week

Prior to visit the practicum sites, a detailed plan of action should be developed by the prospective teacher educator through peer interaction and guidance of the mentor teacher educator. This plan of action may undergo modifications during the thematic practicum.
The final programme of action actually conducted should be enclosed to the report (to be countersigned by the head of the institution/organization).

- ✓ Duration for Practicum on one issue w.r.t. to one theme specialization - 1(one) week
- ✓ **Total duration for Practicum on Theme Specialization (*on two themes*) – 2 (two) weeks**

Assessment Criteria

- **For each Theme (or issue)**
  - For the detailed programme of action: … … 5 marks
  - Quality of engagement in the Field Work: … 10 marks
  - Quality of the Report: … … … … … …10 marks

Total (for One Theme): … … 25 marks

Suggested Activities (Themes)

Sl. No.	Theme Specialization (Paper-1)	Suggested Activities
1.	**Educational Management**	1. Field visit to RMSA/SSA office at block/district/state level to collect and review the records of annual work plan and budget. 2. Study the structural and functional setup of management in school for elementary/secondary education of state government.
2.	**Educational Policy**	1. Visit to SCERT/SIE; RMSA/SSA Office State departments of Education, NCERT, NUEPA, CBSE, BSE and related institution for collection of relevant information on planning and implementation of policies 2. Interaction with stakeholders about gaps in planning and implementation of policies.
3.	**Foundations of Educational Technology**	1. Plan and develop e-content for any one approach like MOOC/E-learning/Flipped learning /Blended Learning. 2. Assessment of e-learning practices in secondary and higher secondary schools.
4.	**Environmental Awareness**	1. Assessing the levels of Environmental Awareness of students and teachers in schools and its impact on building a healthy sense of environment protection in and out of school campus. 2. Visit to Pollution control board, forest department, NGOs and agencies working in the area and collection of information about planning and implementation of different activities
5.	**Guidance and Counselling Services in Schools**	1. Observe the processes followed in providing guidance to student teachers in DIETs/ TEIs and explore the possibility of improving the process. 2. Visit to State/Central/Private schools and analysis of available programme for career awareness and counselling of students.
6.	**Pre-School Education**	1. Analysis, reflection and reporting about the physical, and human resources available and being used in Anganwadis for promoting pre-school education. 2. Visit to NTT /PSTE institution, collection of relevant information, and reflection on activities organized, assessment processes, student teachers profile etc.

The activities (themes) for the Theme Practicum during the Vth Semester listed here are suggestive. The concerned Institute/ Teacher Educator(s) can formulate other activities(themes) relevant to each of the thematic specializations.

SIXTH SEMESTER

TEC-2: Issues and Research in Teacher Education

Semester-VI	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours- 64

Objectives:

On completion of this course, the prospective teacher-educator shall:

- *Reflect on the problems and issues in teacher education.*
- *Explain various approaches to teacher development.*
- *Identify the issues in conducting research in teacher education.*
- *Realize the major areas of research in teacher education.*
- *Explain the mechanisms of quality assurance in teacher education*.

Detailed Course Content:

Unit I: Problems and Issues in Teacher Education

- Challenges in professional development of teachers w.r.t. school education
- Issues related to enhancing teacher competence, commitment and teacher performance.
- Maintaining and implementing standards in teacher education – admission policies, staffing pattern, qualification and mode of recruitment and service conditions of teacher educators.
- Teacher empowerment and motivation: issues and concerns.
- Unplanned growth of teacher education institutions.

Unit II: Perspectives of Teacher Education

- Teacher Development: concept, factors influencing teacher development – personal and contextual.
- Teacher Expertise - Berliner's stages of development of a teacher.
- Approaches to teacher development – self-directed development, co-operative or collegial development, change- oriented and staff development.
- Different organizations and agencies involved in teacher education- their roles, functions and networking.
- Preparation of teachers for various disciplines i.e. art, craft, music, and physical education - existing programmes and practices.

Unit III: Issues in Conducting Research in Teacher Education

- Methodological issues of research in teacher education- direct versus indirect inference, generalizability of findings, laboratory versus field research, scope and limitations of classroom observation
- Availability of Resource Support: Types of resources for research – Literature, Online resources, guidance for research, funding for research
- Resource Centers: NCERT, NUEPA, CSIR. University Libraries and Resource Centers, SCERT, IASEs – Available resources, Roles in promoting research
- Research on pedagogical approaches in teacher education including classroom processes.
- Programme evaluation of in the area of teacher education.

Unit IV: Major Areas of Research in Teacher Education

- *The Continuum of Teacher Education*: Initial teacher education; professional qualifications and experiences; the career entry phase, including induction and probation; Continuing professional development, including current needs (individual, school, system), current provision; Developing professional learning communities; Standards of teaching, knowledge, skill and competence across the continuum
- *Teaching in a Changing Society*: Teaching for diversity, inclusion and special educational needs; Teaching for social capital; Teaching for citizenship and moral development; Developing creative, lifelong learners; Using ICT for teaching, learning and assessment; Places and spaces for learning, including virtual learning environments and multimodal texts..
- *Pedagogy*: Effective teaching of literacy and numeracy; Integration of subject themes and cross curricular working; Whole school curriculum policy development and evaluation; Assessing for learning/formative assessment; Pedagogic approaches and perspectives on learning
- *Teaching as a Profession*: Perceptions of teacher professionalism; Perceptions of the role of the teacher; Self-regulation in the teaching profession; Collegiality in teaching; Entry criteria; The development of teaching as a profession (national and international trends); Progression paths in teaching (national/international trends)
- *Core Education Principles and Policy Issues*: The changing context of /governance/patronage/ethos; Supply of, and demand for, teachers; Partnership within education; The potential for re-conceptualization of the education system towards an improved teaching and learning experience

Sessional Work:

Every prospective teacher-educator shall undertake ***any two*** of the following:

- A critical appraisal of researches in areas of teacher education
- Critical review of at least one in-service teacher education programme conducted in the institution or in any nearby teacher education institution.
- Preparation of a list of possible research topics on teacher education contextual to the state specifying the need for each study.
- Development of a paper specifying the efforts for teacher empowerment programme in the teacher education institution.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

Canon, L. & Monin,L.(1978). *A guide to teaching fanciness*. London: Mtehner.

Coomb, A.W.et al.(1974). *The profession education of teachers: A humanistic approach to teacher training*. Boston: Allyaon & Becon Inc.

Gage,N.L.(1963). *Handbook of research on teaching*. Chicago: Rand McNally College Publishing Co.

Joyee, B. & Showers, B.(1983).*Power in staff development through research on training*. Alexandria Virginls: ASCD.

Sikula, J., Buttery, T.J., and Guyton,E. (1998). *Handbook of research on teacher education* (2nd Edn.). New York: Simon & Schuster Macmillan.

SSC-2: Emerging Issues in Elementary Education

Semester-VI	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours- 64

Objectives:

On completion of this course the prospective teacher-educators shall:

- *Understand the historical development of elementary education in India.*
- *State the various programmes and strategies for UEE.*
- *Explain the roles of Central and State bodies in elementary education.*
- *Reflect upon the impact of decentralization in elementary education.*
- *Reflect upon various concerns and challenges related to elementary education.*

Detailed Course Content:

Unit 1: Elementary Education: Developmental Perspectives

- Elementary Education: Meaning, importance and objectives
- Indigenous system of Elementary Education in India before the British rule
- Elementary Education scenario during the British rule : Recommendations of Wood's Dispatch, Hunter Commission, Hartog Committee and Sargent Committee.
- Elementary Education scenario during Post-independence period : Constitutional Provisions, Recommendations of the Education Commission (1964-66), Common School System, National Policy on Education 1968 and 1986/92, Acharya Ramamurthy Committee (1990), Recommendations of Saikia Committee 1997
- Constitutional Provisions for Elementary Education: Art 45, 21A, 42nd, 73rd and 86th Amendments of the Constitution, RCFCE Act, 2009

Unit 2: Programmes and Strategies for UEE

- Universalization of Elementary Education : Concept, objectives and rationale
- Programmes and Strategies : Operation Blackboard, SOPT, PMOST , MLL, Mid Day Meal, Free Supply of Books and Uniforms, Scholarship for Girls and SC / ST children – their concepts, objectives and impact
- SSA – Objectives, focus area, implementation strategies; role of OPEPA in Odisha for quality enhancement in elementary education; SSA Framework of Implementation after the RTE Act,2009 – Principles of revamping SSA activities laid down by Anil Bordia Committee, Major features of modified implementation strategies
- Strategies for Quality Education at Elementary Stage: Adoption of constructivist approach, Activity-based classroom transactions; Use of community resources in meaningful learning, Important features of curriculum at elementary level: Relevance. integration, flexibility, contextuality and plurality

Unit 3: Governance and Planning in Elementary Education

- Elementary Education under Five Year Plans – Targets, Provisions and priorities
- Role of Central Government : Policy formulation, financial provisions for states, matching grants, centrally sponsored schemes, role of MHRD (school education and literacy department), CABE, NCERT, RCI under the Ministry of Social Justice and Empowerment, Ministry of Women and Child Development, Ministry of Tribal Affair, Ministry of Minority Affair

- Role of State Government : S & ME Department, Directorates (Elementary, TE and SCERT, SIEMAT, SIET, ELTI, BEO, DIET and other monitoring agencies), Women and Child Development Department, SC and ST Development Department – their functions
- Decentralisation of Elementary Education : Role of Panchayat Raj Institutions (Zila Parisad, Grampanchyat) PTA, MTA, SMC, NGOs, Civil Society and Advocacy Groups – their importance, area of concern and functions
- International support Agencies : UNICEF, UNESCO, World Bank and WHO

Unit 4: Concerns and Challenges of UEE

- Achievement of UEE in terms of universal access, retention and success
- Quality concerns - Classroom processes, learning achievement, teacher preparation and teacher performance
- Challenges related to inclusive education, mainstreaming and multilingualism
- Issues related to assessment with reference to CCA implementation
- Issues related to the implementation of the RTE Act, 2009: Admission in age appropriate grades, Special Training, No detention policy, Role of Local Authority, Community involvement, Ensuring quality education

Sessional Work:

Every prospective teacher-educator shall undertake ***any two*** of the following:

- Preparation of a report on the impact of any intervention for UEE using survey method.
- Preparation of an appraisal report on the functions of local bodies in elementary education and the constraints faced.
- Preparation of a report on implementation of the RCFCE Act.
- Prepare a seminar presentation on the impact of CCA practices on quality learning performance at elementary level.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

Coombs P.H.(1985). *World crisis in education: The view from eighties.* Oxford University Press, New York.

Delors, Jaques et al. (1996). *Learning: The treasure within – Report to UNESCO of the International Commission on Education for the Twenty-first Century*. Paris: UNESCO.

Dreze, Jean, and Sen, Amartya (2002). *India: Development and participation*. New Delhi: Oxford University Press.

Duggan, R. C. and Pole, C. J. (1996). *Reshaping education in the 1990s: Perspectives on primary schooling.* London: Falmer Press.

Faure E. and others (1973). *Learning to be: The world of education today and tomorrow*. Paris:UNESCO.

Govt. of India (1966). *Education and National development*: *Report of the Indian Education Commission (1964-66).* New Delhi: Department of Education.

Govt. of India (1986/1992). *National policy of education 1986/92*. MHRD, Deptt. of Education.

Govt. of India (1993). *Education for all: The Indian scene*,New Delhi: Department of Education, Ministry of Human Resource Development.

Govt. of India (2001). *Sarva Shiksha Abhiyan: Framework for implementation* New Delhi: Department of School Education and Literacy, MHRD.

Govt. of India (2005). *National plan of action for children 2005*. New Delhi: Department of Women and Child Development.

Govt. of India (2011). *Sarva Shiksha Abhiyan: Framework for implementation –Based on the Right of Children to Free and Compulsory Education Act 2009*.New Delhi: Department of School Education and Literacy, MHRD.

Gupta, V.K and Gupta , Ankur (2005). *Development of education system in India*. Ludhiana: Vinod Publication.

Jha, J. and Jhingran, D. (2002). *Elementary education for the poorest and other deprived groups: The real challenge of universalisation.* New Delhi: Centre for Policy Research.

Kumar K (2004), *What is worth teaching?* (3rd Edn.) New Dewlhi Orient Longman.

Kurrian, J. (1993) Elementary Education in India, New Delhi: Concept Publication.

Malhotra, P.L. (1986) School Education in India : Present status and Future Needs, NCERT, New Delhi.

MHRD (2001): Convention on the Right of the child. New Delhi.

Mukherjee, S.N. (1964). *Education in India, today and tomorrow*. Baroda:Acharya Book Depot.

Naik, J.P. (1965) *Elementary education in India: The unfinished business*. Bombay: Asia Publishing House.

NEUPA (2014). *India: Education for all – Towards quality with equity*. New Delhi.

Pathak,Avijit (2002). *Social implications of schooling*. New Delhi: Rainbow Publishers.

Prakash, V.(Ed.) (1997). *Teacher empowerment and school effectiveness at primary stage.* New Delhi: NCERT,.

Rajput, J.S. (1994). *Universalisation of elementary education: Role of the teacher*. New Delhi: Vikas Publishing House

Rao. V.K (2007). *Universatisation of elementary education*. New Delhi: Indian Publishing House:

Rawat, D.S.et al. (1981). *Universalisations of elementary education*. New Delhi: NCERT.

Report of the Delors Commission, UNESCO, 1996

Sinha, A. (1998). *Primary schooling in India*. New Delhi: Vikas Publication.

Walia, J.S. (1998). Modern Indian education and its problems. Jalandhar: Paul Publishers,.

World Bank (1997). *Development in practice: Primary education in India*. Washington DC: The World Bank.

SSC-3: Emerging Issues in Secondary & Senior Secondary Education

Semester-VI	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours- 64

Objectives:

On completion of this course the prospective teacher-educator shall:

- *Describe the historical development of secondary education in India.*
- *Explain various programme and strategies for quality improvement of secondary and senior secondary education.*
- *Explain the national and state support mechanism for effective governance of secondary and senior secondary education.*
- *Elaborate the pedagogic approaches for enabling learning enrolment in classroom at the secondary and senior secondary level facilitating quality learning.*
- *Reflect upon the issues and challenges in secondary and senior secondary education and the strategies to address those.*

Detailed Course Content:

Unit 1: Developmental Perspectives

- Secondary Education – Structure, scope and functions
- Status of secondary education during British Period
- Secondary education during post independence period: Recommendations of Secondary Education Commission (1952-53) and the Education Commission (1964-66) with reference to structure, aims, curriculum and evaluation.
- Provisions in the National Policies on Education 1968, 1986 / 92 in respect of Secondary and Senior/Higher Secondary Education.

Unit 2: Programmes and Strategies

- Universalization of Secondary Education : RMSA – purpose, structure and interventions
- Secondary education for accelerating Human Resource Capital, Knowledge Society, Skilled Manpower and Progressive Society
- Vocational Education at the secondary stage: Importance - Recommendations of the Education Commission (1964-66) and NPE 1986/92; Objectives, implementation strategy and assessment
- Vocational education at the senior secondary stage: Importance (Recommendations of the Education Commission (1964-66), Adisheshiah Committe Report, 1978 and NPE 1986/92), objectives; National Vocational Education Qualification Framework (NVEQF); Institutional arrangements, implementation strategies; Issues and challenges in Odisha.

Unit 3: Governance and Plannnig

- Role of Central Government: MHRD, CABE, CBSE, NCERT, CIET, NIOS, IGNOU, Ministry of Social Justice and Empowerment, RCI, Ministry of Tribal Affairs and Ministry of Minority Affairs.

- State level Support Mechanism- Department of School and Mass Education, SC&ST Development Department, SCERT, SIET, SIEMAT, SIOS; District Level mechanism– DEO, BEO, SMDC, PTA; Role of Local and Civic bodies and NGOs
- Secondary Education under Five Year Plans – Targets, Provisions and Priorities.
- Support from International Agencies : UNICEF, UNESCO, World Bank and WHO

Unit 4: Issues, Challenges and Strategies

- Access, enrolment, retention, achievement, equity and equality (education of girls, disadvantaged and children with diverse needs)
- Quality concerns in Secondary and Higher Secondary education – infrastructure, classroom processes, teacher profile, teacher preparation and teachers' professional development
- Enabling learning environment, classroom processes, learning assessment with reference to CCA and teacher quality - Use of Technological Pedagogical Content Knowledge (TPCK)
- Skill Development: Life skills and Vocational –Scope, Objectives and Strategies
- Monitoring and Sustainability of programmes

Sessional Work:

Every prospective teacher-educator shall undertake ***any two*** of the following:

- Preparation of a seminar presentation on post-NPE '86 scenario in India: Programmes for quality improvement in secondary education.
- Preparation of a survey report on vocational education at the senior secondary stage in Odisha: Status, issues and strategies.
- Preparation of a write up on utility of TPCK in transaction of lessons
- Survey of current monitoring practices in secondary education in Odisha and suggestion of alternative and viable strategies.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course.

Suggested Readings:

Chopra, R.K.(1993). *Status of teachers in India*. New Delhi: NCERT.

Coombs P.H. (1985): *World crisis in education: The view from eighties*. Oxford University Press, New York.

Faure E. and others (1973). *Learning to be: The world of education today and tomorrow*. Paris: UNESCO.

Govt. of India (1953). *Report of the Secondary Education Commission*. New Delhi: Department of Education.

Govt. of India (1966). *Education and National development*: *Report of the Indian Education Commission (1964-66).* New Delhi: Department of Education.

Govt. of India (1986/1992). *National policy of education 1986/92*. MHRD, Deptt. of Education.

Govt. of India (1993). *Education for all: The Indian scene*,New Delhi: Department of Education, Ministry of Human Resource Development.

Govt. of India (1993). Education for all: The Indian scene. New Delhi: Department of Education, Ministry of Human Resource Development.

Govt. of India (2005). *Universalisation of secondary education : Report of the CABE Committee.* New Delhi: MHRD.

Govt. of India (2010). Govt. of India (2005). *Framework for implementation of Rashtriya Madhyamik Shiksha Abhiyan.* New Delhi: MHRD.

Gupta, V.K and Gupta , Ankur (2005). Development of education system in India. Ludhiana: Vinod Publication.

Jayapalan, N. (2005). *Problems of Indian education*. New Delhi : Atlantic.

Mukhopadhyay, S. and Anil Kumar, K. (2001). *Quality profiles of secondary schools*. NIEPA, New Delhi.

National Research Council (2002). *Knowledge economy and postsecondary education: Report of a workshop*.Committee on the Impact of the Changing Economy on the Education System. P.A. Graham and N.G.Stacey (Eds.). Cener for Education, Division of Behavioral and Social Sciences and Education. Washington, D.C.: National Academy Press.

Sujatha, K & Ravi G (2011). Development of secondary education in India. New Delhi: Shipra Publication

Sujatha, K & Ravi G (2011). Management of secondary education in India: Quality, programme and administration. New Delhi: Shipra Publication.

Tilak, J B G (2008). Financing secondary education in India. New Delhi: Shipra Publication

Theme-based Specialization

TS-1:Educational Management and Leadership

P.2 : Educational Leadership

Semester-VI	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours- 64

Objectives:

On completion of this course, the prospective teacher-educator shall:

- *State the characteristics and functioning of educational leadership.*
- *Describe the theories and models of educational leadership*
- *Identify the successful leadership behaviours.*
- *Relate the pupils' learning to the leadership practices.*
- *Reflect upon the issues and challenges of educational leadership.*

Detailed Course Content:

Unit 1: Educational Leadership

- Leadership: Meaning, scope and objectives
- Educational Leadership: Meaning, Significance, characteristics, scope and functions; Personalized leadership - Characteristics, effects; Distributed Leadership - Characteristics, effects, forms and Patterns;
- Leadership behavior: Dimensions, Risk taking behavior, vision building; Cognitive and Affective characteristics of a successful leader
- Roles of Educational Leadership at the State, District and Institutional levels in promoting pupils' learning

Unit 2: Theories and Models of Educational Leadership

- Theories: Trait, Style (Autocratic, Laissez Faire, Grid),Situational, Contingency
- Models: Academic, Professional, Humanistic, Bureaucratic, Visionary, Transformational

(*Each Theory and Model shall be discussed in terms of nature/characteristics, practices*)

- Creating school ethos: setting academic climate and work culture

Unit 3: School Leadership Programme

- Developing curriculum and learning materials for diverse school contexts
- Oraganizing capacity building programme of school leader: short term and long term;
- Empowering grassroots leaders like SMCs, SDMCs, PTAs, MTAs to contribute school quality; Establishing linkage between school leader and grassroots leaders
- Documentation and dissemination of best school leadership practices

Unit 4: Issues and Challenges

- Leading and managing the individual and groups for an organizational climate
- Management of human resources for goal realization
- Ensuring the quality of education
- Liaisoning with higher authorities and community for participatory management
- Using technology in leadership and management.

Sessional Work:

Every prospective teacher-educator opting this course shall undertake ***any two*** of the following:

- Visit any educational institution, observe the leadership qualities of the head of the institution and prepare a report.
- Preparation of a seminar paper on any model of school leadership in ensuring quality education.
- Develop a vision paper on how to create a learning friendly organizational climate
- Development of a paper on the distributed leadership qualities comparing with personalized leadership.

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course

Suggested Readings:

Avolio, B. & Yammarino, F. (Eds.) (2002). *Transformational and charismatic leadership: The road ahead* . Amsterdam: JAI Press.

Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.

Bass, B. M. (1985). *Leadership and performance beyond expectations*. New York: The Free

Bass, B. M., & Avolio, B. J. (1994). *Improving organizational effectiveness through*

Begley, P., & Johansson, O. (2003). *The ethical dimensions of school leadership*. Dordrecht, The Netherlands: Kluwer Academic Publishers.

D. L. (1987). *School leadership and instructional improvement*. New York: Random

Harris, A., & Chapman, C. (2002). *Effective leadership in schools facing challenging* House.

Murphy, J. (Ed.) (2002). , *The educational leadership challenge: Redefining leadership for the 21st century.* Chicago: University of Chicago Press.

Murphy, J. & Datnow, A. (Eds.) (2003), *Leadership lessons from comprehensive school transformational leadership*. Thousand Oaks, CA: Sage.

Murphy, J., and Louis, K. S. (Eds.). (1994). *Reshaping the principalship: Insights from transformational reform efforts.* Thousand Oaks, Caller: Corwin Press.

Theme-based Specialization

TS-2: Educational Policy and Planning

P.2 : Educational Planning

Semester-VI	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours-64

Objectives:

On completion of this course, the prospective teacher-educator shall:

- *Acquaint himself/herself with the concept, nature, principles, procedures and approaches of Educational Planning.*
- *Understand the process of educational planning in India.*
- *Develop skills in planning using a variety of strategies.*
- *Understand the types and process of organization of planning*
- *Understand critical process of macro-planning and micro-planning and management techniques.*
- *Explain the role and contribution of different agencies in educational planning.*

Detailed Course Content:

Unit 1: Educational Planning

- Educational Planning: Concept, Nature, Importance and Objectives
- Approaches to Educational Planning; Social Demand Approach, Manpower Approach, Cost-benefit Approach
- Principles of modern educational planning.
- Models of Educational Planning: Intra-Educational Extrapolation Model, Demographic Projection Model

Unit 2: Kinds and Problems of Planning

- Strategic Planning, Short term planning, Management Planning, Area planning, Institutional Planning, Micro and Macro Planning, Rolling Plan
- Decentralized Planning: Concept, Pre-requisites for decentralized planning – functional, financial, administrative, democratic
- Problems of Planning: Internal and External

Unit 3: Administration and Organization of Planning.

- Administrative Machinery: (a) National (b) State level (c) District level (d) Block level and (e) Institutional level.
- The Planning Process and Procedure.
- Factors influencing in determination of priorities in Planning.
- Need-based Data for Educational Planning.
- Research Contribution to policy making

Unit 4: Educational Planning and Financing in India

- Educational Planning in India: Role of National Development Council, Planning Commission and State Planning Boards,
- Five Year Plans in India – Perspective Planning, Factors Influencing Educational Allocations

- Resources for Educational Planning: Public Funds, Local Body Funds, Private Funds
- Principles of Educational Finance, Salient Features of Financing of Education in India

Sessional Work:

Every prospective teacher-educator opting this course shall undertake ***any two*** of the following:

- Prepare a program of structure and functions of the institutions in administration and management of elementary and secondary education at state, district, cluster and block levels for your state.
- Prepare a plan for procurement, utilization and maintenance of resources in education.
- Prepare formats for performance appraisal of elementary and secondary school teachers and administering them in simulated condition.
- Prepare a plan of action to organize co-curricular activities.
- Prepare an Annual Budget for an Institute

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course

Suggested Readings:

Bhatnagar, R.P. and Agrawal, V(2006) Educational Administration Supervision, Planning and Financing. R.Lall Book Depot, Meerut.

Fletcher, B.A. (1963). Planning of Education., Leeds, Institute of Education.

Hanson, A.H. (1966). The Process of Planning: A Study of India's five-year Plans (1950-1964) London: Oxford University Press

Mukerji, S.N.. *Administration of Educational Planning and Finance*. Baroda : Acharya Book Depot.

Naik, J.P. (1965). Educational Planning in India, India: Allied Publishers.

Tilak, J.B.G. (1992). Educational Planning at Grassroot. Ashish Publications. New Delhi.

Varghese N.V. (1987). Set of Modules on District Planning in Education. New Delhi. NEUPA.

Theme-based Specialization

TS-3: ICT in Education

P.2 : E-Content Design and E-Learning

Semester-VI	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours-64

Objectives:

On completion of this course, the prospective teacher-educators shall:

- *Examine the relationships between learning theories and digital technologies*
- *Explain the principles of instructional design and identify the salient features of different instructional design models*
- *Explain the process involved in designing and developing e-content for digital learning*
- *Systematically design and critically evaluate a digital learning resources on a topic of their choice*
- *Use different online and offline tools for creating e-content*
- *Explore and evaluate various digital resources for enhancing learning*
- *Learn to analyze learning situations and identify associated technology-related design challenges.*
- *Develop skills in the design of educational media, and the integration of design thinking with scholarship in education.*

Detailed Course Contents:

Unit 1: Evolution of Educational Media

- Emergence and evolution of educational radio and TV: Trends in educational radio – FM, community radio, internet radio and podcast; Educational television – instructional TV, CCTV, IPTV, LCD TV, LED TV, 3D and HDTV, UHD; Display boards – black board, flannel board, peg board, white board, interactive white board, bendable and foldable display
- Emergence and evolution of projected aids – hand made slide projector, photographic slide projector, film projector, epidiascope, OHP, multimedia projector, document projector, lead diode/pico projector
- Emergence and evolution of storage media-text book, magnetic tape, floppy disc, CDROM, DVD, Hard disk, Optical drives, cloud storage
- Emergence of new information technology- convergence of computing and telecommunications; transmission technology - Face to face, co-axial cable distribution, optical fibre, satellite, infrared, Bluetooth, internet, Wi-Fi, 3g, 4g e-mail, Instant messaging, chat, online conference; e-mail, Instant messaging, chat, online conference
- Emergence and evolution of computer- mainframe computer, desktop/personal computer, laptop, palm top computer, tablet, phablet, wearable computing

Unit 2: Other E-content Tools

- Open source versus proprietary tools; Screen casting tools (camtasia) for creating screen casting presentations, Graphic editing; Timeline (timeline) for creating time lines, Picture/photographs (GIMP/Mypaint); Concept map (freemind, VUE)
- Animation -2d animation (Pencil, Tupi)
- Collaborative authoring tools

- Authoring tools (eXe Learning, Xerte) – putting together e-content with interactivity
- E-book tools (sigil, calibre) for creating and editing e-books

Unit 3: Foundations of Online Learning and E-learning Tools and Standards

- E-learning: Need and characteristics; Characteristics of digital natives;
- Approaches to e-learning: Components of e-learning, E-learning contexts
- Synchronous and Asynchronous Tools
- Learner Management System: Meaning, Types, features, proprietary versus open source LMS
- Use of web 2.0 Tools/communication and collaboration tools in e-learning
- E-learning Standards: Metadata: meaning, types and need; SCORM: features, procedure and limitations; IMS: features, procedure and limitations; ARDIANE: features and procedure ; IEEE-LOM; Dublin core; AICC
- Subject specific tools for e-learning: science, Mathematics, language, and social student

Unit IV: E-resources and e- learning approaches

- Reusable Learning Objects (RLO): meaning, characteristics and need, RLO repositories
- Open Educational Resources (OER): meaning, need and importance, sources of OER, adoption, adaption –openness, relevance, and accessibility; Open textbooks: meaning and features; OER graphics, videos, audio/music, courses, etc. and its sources
- Evaluating e-resources- criteria
- Emerging e-learning approaches: M-learning - Mobile applications ,Advantages of M-learning ,Ubiquitous technology and mobile learning, Blended Learning: concept, requirements, advantages and limitations, MOOC- concept, tools, advantages and limitations; Flipped Learning: concept, procedure, tools, advantages and limitations
- Designing courseware for e-learning, blended learning, MOOC, Flipped, M-learning

Sessional Work:

Every prospective teacher-educator opting this course shall undertake ***any two*** of the following:

- Seminar presentation on implications of Learning theories for Instructional design.
- Developing a multimedia e-content on an educational topic based on different models of instructional design.
- Developing an audio/ video on an educational topic using software.
- Developing e-book on a specific subject/chapter

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course

Suggested Readings:

Andrew A Kling(2010). Web 2.0 (Technology 360)**.** Lucent Books:New Delhi.

Barbara B. Levin, Lynne Schrum. (2012). *Leading technology-rich schools: Technology & education, connections* (Tec). New York: Teachers College Press.

Information Resources Management Association. (2011).*Instructional Design: Concepts, Methodologies, Tools and Applications*: 3

Lee, William W., Dianna, L. Owens, (2001) Multimedia based Instructional design: Computer Based Training. Jossey-Bass

Liz Arney (2015.) Go Blended!: A Handbook for Blending Technology in Schools

Loveless Avril (2001). ICT-pedagogy and the curriculum-Subject to change. Routledge Falmer: London.

Lynne Schrum, Barbara B. Levin. (2010).Leading 21st-Century Schools: Harnessing Technology for Engagement and Achievement. Corwin: New Delhi

Mishra, S. (Ed.) (2009). STRIDE Hand Book 08: E-learning. IGNOU: New Delhi.

Mohanty,L. and Vora, Neeharika (2008). ICT strategies for schools- a guide for school administrators. Sage publications: New Delhi.

Mohit, K.(2003). *Design and implementation of web-enabled teaching tools*. London: IRM Press.

NCERT (2015). E-pathsala: An web platform for students, teachers, educators and parents link. *ncert.nic.in*.

NCERT92015). e-*pathsala: An web platform for students, teachers, educators and parents link*. ncerti.nic.in.

Nicole A. Buzzeto-More (Ed.) (2007). Advanced Principles of Effective e-Learning, Informing Science Press, California

Noam Shemtov, Ian Walden. (2014)Free and Open Source Software: Policy, Law and Practice. Oxford University Press

Patricia Smith, Tillman J. Ragan. (1999).Instructional Design. John Wley and Sons

Robert Maribe Branch. (2009).Instructional Design: The ADDIE Approach. Springer

Roblyer M.D., Aaron H. Doering (2012). Integrating Educational Technology into Teaching (6th Edition)

Rosemary Papa. (2010).Technology Leadership for School Improvement. Sage: New Delhi.

Sanne Dijkstra (Editor), Franz Schott (Editor), Norbert Seel (Editor), Robert D. Tennyson (Editor), Norbert M. Seel (Editor) (1997). Instructional Design: International Perspectives: Volume I: Theory, Research, and Models: volume II: Solving Instructional Design Problems: 1. Lawrence Abingdon: New Jersey

Semenov, Alexy (2005). Information and Communication Technologies in Schools. A handbook for Teachers. UNESCO

Shalin Hai-Jew. (2012). Open-Source Technologies for Maximizing the Creation, Deployment, and Use of Digital Resources and Information. Information Science Reference: USA

Steven W. Anderson, Deborah Siegel. (2014).The Tech-Savvy Administrator: How do I use technology to be a better school leader? ASCD

Theodore Lee (2008). Professional Development of ICT Integration for Teachers. VDM Verlag: Germany.

UGC (2015). *e-pathsala: a platform for teachers and educators.* ugc.ac.in ; ugc.govt.in.

Viva Lachs (2000*). Making Multimedia in the Classroom-A Teacher's Guide*. Routlegde Farmer: London.

Whitehead, Bruce M., Jensen, Devon , and Boschee, V. (2013). *Planning for technology: A guide for school administrators, technology coordinators, and curriculum leaders*. Corwin: New Delhi.

Theme-based Specialization

TS-4: Environment Education

P.2 : Environmental Education

Semester-VI	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours-64

Objectives:

On completion of the course, the prospective teacher-educator shall:

- *understand the meaning, need and scope of environmental education*
- *realize the importance, aims, objectives and strategies of environmental education in schools*
- *elaborate the socio-cultural values and ethics of environmental education*
- *understand the role of information and communication technology in facilitating environmental education*

Detailed Course Content:

Unit 1: Understanding Environmental Education

- Environmental Education: Meaning, importance and scope
- History of Environmental Education: Background and its evolution
- Need of Environmental Education: Emerging environmental crises, causes and corrective measures
- Aims, Objectives and Strategies of Environmental Education with reference to the recommendations of UN Conference Human Environment,1972 (Stockholm), International Environmental Education Programme (IEEP),1975, Confernce on Environmental Education (Tbilisi Declaration), 1977

Unit 2: Environmental Education in Schools

- Integration of environmental education in the existing school curriculum – Approaches (direct and indirect) and strategies
- Environmental education as a discipline –optional subject, independent discipline at the higher levels of education
- Major thrust areas in the school curriculum: Natural resources, natural and man-made environment; Pollution and human health; Natural disasters and their management; Biodiversity its importance and conservation; Sustainable development economy and environment.
- Strategies of Environmental Education: Field work, Project, Community work

Unit 3: Environmental Education and Socio-cultural Values

- Environment and Development: Sustainable development, sustainability of water, food, energy; Developing awareness of sustainable development through education
- Role of community in protection of environment, resource conservation and sustainable development; Strategies for developing community awareness on environment

management through dialogue, campaign, exhibitions, empowering self-help groups and NGOs

- Environmental ethics: concept and objectives, environmental values – utilitarian, ecological, aesthetic, and moral
- Role of education in environmental management: Approaches and strategies

Unit 4: Environmental Education and ICT

- Impact of Science and technology on environment al education, Ecotourism, Eco development
- Role of mass media and information technology in protection of environment
- Environmental Biotechnology- Need for research and development, environment and human health.
- Bioremediation technology for cleanup of polluted environment
- Technology for sustainable development of ecosystem

Sessional Work:

Every prospective teacher-educator opting this course shall undertake ***any two*** of the following:

- Preparation of case study report on any one polluted system (like water body, garbage disposal etc.)
- Developing a questionnaire (or any other tool) for ascertaining the awareness of community on natural resource conservation
- Preparation of a paper on environmental ethics
- Conducting a survey on practices (curricular and other curricular) related to environmental education
- Preparation of a report on use of ICT fro eco-conservation

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course

Suggested Readings:

Joy, P., & Neal, P. (1994). *The handbook of environmental education*. London,

Kelu, P. (2000). *Environmental education: A conceptual analysis*. Calicut:

Kumar, A. (2009). *A text book of environmental science*. New Delhi: APH Publishing Ltd.,

Reddy, P. K., & Reddy, N. D. (2001). *Environmental education*. Hyerabad: Neelkamal

Sharma, B. L., & Maheswari, B. K. (2008). *Education for environmental and human value*.

Sharma, R. A. (2008). *Environmental education*. Meerut: R.Lall Books Depot.

Sharma, R. G. (1986). *Environmental education*. New Delhi : Metropolitan Book Co., Pvt.

Sharma, V. S. (2005). *Environmental education*. New Delhi: Anmol publication.

Singh,Y. K. (2009). *Teaching of environmental science*. New Delhi: APH Publishing

Theme-based Specialization

TS-5: Guidance and Counselling

P.2 : Counselling Processes and Strategies

Semester-VI	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours-64

Objectives:

On completion of the course, the prospective teacher-educator shall:

- *Appreciate the needs and goals of counselling*
- *Analyze the relationship between guidance and counseling,*
- *Recognize different areas of counseling,*
- *Identify and elaborate the various stages involved in the process of counseling,*
- *Become acquainted with the skills and qualities of an effective counselor.*
- *Become acquainted with the various approaches and techniques of counselling*

Detailed Course Content:

Unit 1: Nature of Counselling Service

- Meaning, nature and scope of counseling; differentiating guidance, counselling and psychotherapy
- Goals and Principles of counseling
- Qualities of an effective counselor
- Relationship Issues, concerns and problems of childhood and adolescence stage

Unit 2: Counselling Process and Counselling

- Identification of cases for counselling
- Basic counseling and communication skills
- Stages of the counselling process
- Nature and importance of counseling relationship
- Application of skills for building a positive classroom climate to enhance learning
- Acquaintance with major counselling approaches: person-centered and gestalt

Unit 3: Types and Areas of Counselling

- Group counselling: nature, process and skills
- Counselling techniques: cognitive, behavioral and systemic
- Areas of counselling: family counselling, parental counselling, adolescent counselling, counselling of girls, counselling of children belonging to special groups
- Peer counselling: concept and relevance to the Indian situation.

Unit 4: Guidance and counselling for promoting psychological well-being of students

- Nature and causes of behavioral problems; guidance of students with behavioral problems, Guiding underachievers
- School discipline-problems of violence, bullying, drug abuse, truancy, and dropout etc.
- Stress: nature, causes and consequences; types of coping skills and developing coping skills

- Promoting psychological well-being and peace through school based guidance programmes.

Sessional Work:

Every prospective teacher-educator opting this course shall undertake ***any two*** of the following:

- Identification of cases for counselling
- Exploring the possibilities for peer counselling and preparing a plan for peer counselling in the school
- Writing a report on interacting with the counselor with regard to the process of counselling, nature of problems of the students.
- Identification of a case (adolescent) with behavioural problem, conducting counselling sessions for the benefit of the client and developing a report on it.
- Undertake the process of counselling any one underachiever at the secondary level and prepare a paper for seminar discussion

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course

Suggested Readings: .

Corey, G. (1986). Theory and Practice of Counselling and Psychotherapy, 3rd Ed. Belment: Calif-Brooks.

Cole. Cormier L.& Hackney, H. (1987). *The professional counsellor*. Englewood Cliffs, New Jersey: Prentice Hall.

Dave, Indu (1984). *The basic essentials of counselling*. New Delhi: Sterling Pvt.Ltd.

Egan, Gerard (1994). *The skilled helper* (5thEd.) California: Brookes Cole Publishing Co.

Gazda George R.M.(1989). *Group counselling: A development approach*. London: Allyn and Bacon.

Gladding, Samuel, T. (1996). *Counselling: A comprehensive profession*. New Delhi: Prentice Hall Inc of India Pvt. Ltd.

Mallon, Brenda (1987). *An introduction to counselling skills for special educational needs: Participants manual.* Manchester: Manchester University Press.

Nugent, Frank A. (1990). *An introduction to the profession of counselling. Columbus: Merrill Publishing Co.*

Rao, S.N. (1981). *Counselling psychology*. New Delhi: Tata Mc Graw Hill.

Theme-based Specialization

TS-6: Pre-school Education
P.2 : Preschool Teacher Education and Research

Semester-VI	Credit-4
Marks 100 (Ext.70+Int.30)	Contact Hours-64

Objectives:

On completion of this course, the prospective teacher educators shall:

- *Understand different pre-school teacher education programmes of the country*
- *Reflect on the specifications of ECE/Pre-school Centres*
- *Understand the role of ICT in preschool education and teacher education*
- *Appreciate the pre-school and community coordination*
- *Reflect on the research trends in the area of pre-school education*
- *Identify priorities in research in the area of pre-school education.*

Detailed Course Content:

Unit1: Pre-School Teacher Education Programmes

- Pre-School Teacher education: current scenario, NTT, Certificate in ECCE, Diploma in ECCE, Post Graduate Diploma in ECCE
- In-service training in preschool Education; Role of NIPPCD, SCERTs, DIETs in ECCE Training
- Distance and online mode and role of open universities, institutes: IGNOU, NIOS

Unit 2: Setting up ECE Centres and Maintenance of records

- Identifying local needs and location and safety of the centre and nature of services.Sources of fund raising and community involvement Ensure provision of essential facilities Budgeting and mapping of resources
- Maintenance of records in ECCE settings Need for maintaining different kinds of records such as child related, teacher related and material related records Registers for attendance, admission, fees, teachers and other financial matters.
- Records of monitoring and regulating children's growth and development such as health, anecdotal and cumulative records

Unit 3: Working with Parents and Community

- Need and importance of orienting and working with parents and community.
- Strategies of making contacts- Home visits; Orientation sessions, Group meeting with parents, One to one meeting with parents; Creating parents support group
- Mapping and Mobilization of community resources and their utilization. Organizing advocacy campaigns, improving skills for working with the community. Barriers in community involvement.

Unit 4: Research, Advocacy and Innovation in Pre-School Education

- Advocacy: Meaning ,need and areas in pre-school education; advocacy strategies
- Research areas: Preschool Curriculum; Transactional processes, Planning and Management; Preschool Teacher Education; gaps and priorities.
- Evaluation of ECE programmes, methodology and implications

Sessional Work:

Every prospective teacher-educator opting this course shall undertake ***any two*** of the following:

- Assignment on selected themes from the course
- Study of present status of pre-school teacher education in State/Region/District
- Collection of information on infrastructure of ECCE centres and comparison with NCERT minimum specifications (1992)
- Writing of journal articles on different issues on ECCE
- Development of advocacy materials on pre-school education

The topics for the sessional work listed here are suggestive. The concerned teacher educator(s) can add other projects/topics relevant to this course

Suggested Readings:

Aggarwal, J.C. and Gupta, S. (2007). Early Childhood Care and Education (Ist Ed.). Shipra Publications, New Delhi.

Government of India (1986). National Policy on Education, Department of Education, New Delhi.

M. S. Swaminathan Research Foundation (1995). *Suraksha* - Monograph Series 1-9.Madras.

Mishra, R.C. (2005). *Early childhood education today*, Prentice Hall Publisher

MWCD (2013).*National Early Childhood Care and Education (ECCE) Policy*.Govt of India, New Delhi

MWCD (2013).*National ECCE Curriculum Framework*.Govt of India, New Delhi

MWCD (2013).*Quality Standards of ECCE*.Govt of India, New Delhi

Myers, R. G (1995). *The Twelve Who Survive: Strengthening Programmes of Early Childhood Development in the Third World*, Ypsilanti, Mich., High/ Scope press.

National Council of Applied Economic Research (2001). *Concurrent Evaluation of ICDS -National Report.* New Delhi.

National Council of Educational Research and Training (1993). *Impact of ECE on Retention in Primary Grades – A Longitudinal Study*. New Delhi Curriculum Guide 41

National Institute of Public Cooperation and Child Development (1992). *National Evaluation of ICDS.* New Delhi.

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

NCERT (2005).*Position Paper on National Focus Group on ECE*, NCERT, New Delhi

NCERT(2014).*Early Childhood Care and Education;A way forward*,New Delhi

NCERT (2015).E*xemplar Guidelines for Implementation of Early Childhood Care and Education Curriculum*, NCERT, New Delhi

NCTE (2005). *Report on ECCE Teacher Education: Curriculum Framework and Syllabus Outline*, New Delhi

Neuman, M.J. (2000).Early Childhood Education and Care Policy: International Trends and Developments. *International Journal of Educational Research,33* (1),

NIPCCD (2002). *Children in Difficult Circumstances: Summaries of Research, Resource Centre on Children*, New Delhi.

Pugh, G. (1996*). Contemporary Issues in Early Years: Working Collaboratively for Children* (2nd Ed.) National Children's Bureau, London.

Seefeldt, Carol (1990). *Continuing Issues in Early Childhood Education*. Merrill Publishing Company, Columbus, Ohio.

Sood, N (2003). *Planning and Management of Early Childhood Education: A Case of Himachal Pradesh.* Occasional Paper 32, New Delhi: National Institute of Educational Planning and Administration.

Swaminathan, M. and Daniel, P. (2000). *Activity-based Developmentally Appropriate Curriculum for Young Children*. Indian Association for Pre-school Education, Chennai.

Swaminathan, Mina (1998). *The First Five Years: A Critical Perspective on Early Childhood Care and Education in India.*

UNESCO (2002). *Integrating Early Childhood into Education: the Case of Sweden*. Paris,(UNESCO Policy Brief on Early Childhood, 3).

UNESCO (2006). *Cross-national Compilation of National ECCE Profiles*. Geneva:UNESCO International Bureau of Education.

UNESCO (2007). *EFA Global Monitoring Report – Early Childhood Care and Education*. Washington D. C. World Bank.

UNESCO (2007). *Strong Foundations: Early Childhood Care and Education*, Paris, UNESCO.

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

RTS Pr.-1: Dissertation (Part-IV)

Semester-VI	**Credit-2**
Marks 50 (Internal &External)	**Contact Hours-64**

Objectives:

On completion of the course in this semester, the prospective teacher educator shall

- *Complete the preparation of the research report*

Activities

The research report shall be completed in all respects and shall be submitted for assessment jointly by the external and the supervisor.

The final dissertation shall be assessed holistically by the examiners on criteria decided jointly by the internal and external examiners.

TS Pr.-2: Theme Area Practicum

Semester-VI	Credit-2
Marks 50 (25+25) (Internal)	**Contact Hours-64**

The rationale, objectives, organization and the assessment criteria for the conduct of 'TS Pr.2 Theme Area Practicum' during the VIth Semester are nearly same as detailed for Theme Area Practicum (Paper-1) for the Vth Semester.

The exemplars of activities under each Theme Specialization course are shown in the table below.

Suggested Activities (Themes)

Sl. No.	Theme Specialization (Paper-2)	Suggested Activities
1.	**Educational Leadership**	1. Visit any School/TEI and observe the leadership qualities of the head of institution and its teachers/teacher educators. 2. Analyse the content and processes of any teacher education programme (pre-service or in-service) in respect of the elements of educational leadership inbuilt in such programme.
2.	**Educational Planning**	1. Visit any block/district level office of the SSA/RMSA and analyze the process of preparation of the Annual Work Plan &Budget. 2. Visit any School/TEI and explore the processes followed in preparation of academic, resource and financial planning for the institution.
3.	**Content Design & e-Learning**	1. Analyze the e-contents available in elementary (CAL schools) or in secondary schools/ TEIs and their use for learning. 2. Discuss with teachers of elementary schools or teacher educators in TEIs regarding their experience in MOOC programme.
4.	**Environmental Education**	1. Assessing the state of Environmental Education in secondary schools including the curricular inputs, transactional strategies and the application of the learnt concepts in real life situations. 2. Study the school – community relationships in their efforts in their joint effort to fight environmental pollution (like maintenance of personal and environmental cleanliness, garbage disposal management, tree plantation, etc.)
5.	**Counselling Processes and Strategies**	1. Exploring the existence and possibility of providing career counselling to student teachers in DIETs/ TEIs in a planned manner through individual and group counselling. 2. Identify the socio-educational problems of underachievement and conduct counselling some such identified underachievers for improvement in their learning performance.
6.	**Pre-School Teacher Education & Research**	1. Develop a list of training inputs for the in-service pre-school teachers (Anganwadi workers) through observations of classroom processes and consultation with stakeholders. 2. Visit any PSTE programme/Institution and prepare an evaluation report on the programmes and processes followed in the training of pre-school teachers.

The activities (themes) for the Theme Practicum during the VIth Semester listed here are suggestive. The concerned Institute/ Teacher Educator(s) can formulate other activities (themes) relevant to each of the thematic specialization.