Central University of Rajasthan
(Education for Sustainable Development)
NH-8 Bandarsindri, Kishangarh, District Ajmer, Rajasthan

School of Education

The three years M.Sc. B. Ed. Curriculum is meant for preparing teachers specifically for the senior secondary stage of school education. Hence, it can only include the knowledge domains appropriate for teaching at the senior secondary stage of Education. There exist two main models of teacher education programmes in India. The *long duration integrated model* wherein the subject matter knowledge is learnt alongside professional education courses and the *short duration model* in which the student would have already acquired a degree in the subject to be taught by him/her. This curriculum is meant for the first model.

While deciding on the courses and the structure, the domains of teachers' knowledge as outlined under the "Teacher Education Programmes: Curriculum" in the *International Encyclopaedia on Education* namely, 'subject matter knowledge', 'pedagogical knowledge' and 'pedagogical content knowledge' were considered. Of these knowledge domains, the subject matter knowledge required for teaching at the senior secondary level is presumed to be learnt at the secondary and the undergraduate programmes.

It is felt that a teacher to be a truly professional practitioner requires a conceptual understanding and appreciation of the above domains of knowledge and also the competence to implement the knowledge in specific contexts of teaching. In order that the teacher education programme to become a professional preparation programme, it should have a fair combination of theory and practice. Too much of theory would push the teacher education programme towards liberal arts orientation and hence prepare a disciplinarian rather than an efficient and effective practitioner. What the country needs today is *sound practitioner teacher* rather than those who merely verbalize theoretical knowledge. One way of achieving this would be to have a proper blending of reflections on theoretical basis and sufficient opportunities for practice followed by feedback.

The NCFTE (2009) has provided a suggestive framework for teacher education programmes. It is needless to say that a long duration programme of teacher education will be more comprehensive in its coverage of the suggested courses than a short duration programme, which needs to be selective. The committee has made deliberate attempts at incorporating as many courses from the NCFTE as possible, though in a reorganized structure. The courses in this curriculum are arranged under five areas namely, Foundations of Education, Pedagogical Knowledge, Pedagogical Content Knowledge, School Based Experiences and Add-on Courses instead of three areas as suggested in NCFTE.

In India, teacher education has been an isolated phenomenon in the field of higher Education which was mainly concentrating on primary and secondary school teachers. But it is lately realized by the Universities that in order to enhance quality in teacher education, they should integrate teacher education programmes with curricula across disciplines and faculties. This integration is also essential to develop teaching skills for those who opt for teaching profession in colleges and universities after completion of Ph.D. and Post-doctoral Research. This is the first attempt made by the Central University, Rajasthan with a clear focus on preparing teachers for Junior Colleges. From the next academic session 2014-15, the Central University of Rajasthan has proposed to introduce Integrated M.Sc., B.Ed. and Integrated M.Sc. programmes in the following subjects under the School of Education:

Integrated M.Sc., B.Ed. in the following subjects:

1 Physics
2 Chemistry
3 Mathematics
4 Economics

The integrated Programme proposed by the University is innovative and will be the unique Programme of its kind in the state of Rajasthan.

The salient features of the Integrated Programme:

- The three year integrated teacher education programme focuses on the theory of Education, pedagogical skills and subject content knowledge required for senior secondary level.
- The curriculum is open enough to incorporate the evolving pedagogical developments.
- The duration of Integrated M.Sc. B.Ed. Programme is of 3 Years (6 Semesters). In last two semesters of Integrated M.Sc., B.Ed. Programme (V and VI Semesters), the students will be placed in Senior Secondary Schools/Junior College for internship under the supervision of a mentor.
- The Programme offers Integrated M.Sc. B.Ed. (3 years duration) in four subjects (Mathematics, Physics, Chemistry and Economics)
- The Course structure is designed to prepare students for teaching profession in senior secondary schools.

Eligibility: B.Sc. Graduate

School of Education

As per the vision of The Central University of Rajasthan, various Schools of Studies have already been established by the University. Looking to the need for strengthening Education at all levels of Education in the state of Rajasthan, there is an urgent need for establishing School of Education to provide Integrated Innovative teacher education programmes.

The University Grants Commission has already indicated for the need of providing teacher education by the universities under the National Mission on Teachers and Teaching. The Central University of Rajasthan is keen to participate in this mission to strengthen Teacher Education by creating additional capacity for preparing qualified teachers.

The School of Education will have following Centres to perform various functions as proposed:

- Centre for Pre-service Teacher Education
- Centre for Curriculum Research Policy &Educational Development
- Centre for Learning & Pedagogic Studies
- Centre for Assessment and Evaluation
- Centre for the Professional Development of teachers and Teacher Educators
- Centre for Teachers Resource and Academic Support

The University is situated in the rural setting on National Highway–8 at Bandarsidri, Kishangarh of Ajmer district. It is surrounded by villages having primary, secondary and some Senior Secondary Schools. Therefore, the University has a scope of research in teacher education and developing learning models for applications and generating data for farming policy for educational development for rural areas.

Besides its core functions, the School Education will play a crucial role in extending training to various stakeholders of the University and nearby community:

- The School of Education will organize Orientation Programmes for Elementary, Secondary and Senior Secondary teachers and provide pedagogy, techniques and teaching skills to the teachers.
- The School of Education will provide opportunity to young faculty members of the University for training teaching techniques and skills.
- The Central University of Rajasthan is going to establish Community College from the next academic session 2014-15. Therefore, the school of Education will be helpful in providing service to the community, specially to the students who opt for some work for self-employment.
- The Central University of Rajasthan has already established a business Incubation Centre in the University. Therefore, young entrepreneurs may also have some training to extend their business in future.

The Central University of Rajasthan has created state-of-the-art infrastructure for post graduate programmes and research. Also, the University has teaching faculty for academic programmes. The proposed integrated programmes are designed with integration of various schools/departments. This will augment in depth interactions across the disciplines.

The syllabi of various Integrated Programmes have been prepared by the faculty and circulated to eminent subject experts throughout the country for their comments and suggestions. After incorporating their recommendations in the draft syllabi, these have been finalized by the committee of various disciplines/schools. This will lead to fruitful cross- disciplinary interactions and help the students to develop a contemporary holistic outlook.

Semester	Course Code	Credits	Paper	Title
I	EDU411	03	Core	Basics of Education
	EDU412	03	Core	Secondary Education in India: Status, Challenges and Strategies
II	EDU413	03	Core	Learner and Learning
	EDU414	03	Core	Teaching Approaches and Strategies
III	EDU511	03	Core	Learning Assessment
	EDU512	04	Core	Pedagogy of Science
	EDU513			Pedagogy of Social Science
IV	EDU 514	03	Core	Classroom Organization and Management
	EDU 515	04	Core	Pedagogy of Mathematics
	EDU 516	04	Core	Pedagogy of Physics
	EDU 517	04	Core	Pedagogy of Chemistry
	EDU 518	04	Core	Pedagogy of Economics
V	EDU611	06	Core	School Internship-I
	EDU612	12	Core	School Internship- II
	EDU 613	04	Core	Action Research in Schools
	EDU 614	02	Core	Community Based Participatory Research
Total Credits		50 Credits		

PROGRAMME OUTCOMES

The curriculum is designed to achieve the following objectives of the M.Sc. B.Ed. to integrate content, pedagogy and technology-

1) The student-teacher understands the central concepts, tools of inquiry, and structure of the subjects and can create learning experiences that make these aspects of subject matter meaningful for students.
2) The student-teacher understands how the student learns and develop and can provide learning opportunities that support their intellectual, social and personal development.
3) The student understands how students differ in their approaches to learning and create instructional opportunities that are adapted to diverse learners.
4) The student-teacher understands and uses various instructional strategies to encourage students' critical thinking, problem-solving, and performance skills.
5) The student-teacher understands individual and group motivation and behaviour to create a learning environment that encourages positive social interaction, active engagement in learning and self-motivation.
6) The student-teacher uses effective verbal, non-verbal, ICT and media communication techniques to foster active inquiry, collaboration, and supportive interaction in the classroom.
7) The student-teacher plans instruction based upon knowledge of the subject matter, students, the community and curriculum goals.
8) The student-teacher understands and uses formal and informal assessment strategies to evaluate and ensure the learner's continuous intellectual, social and physical

development.

9) The student-teacher is a reflective practitioner who continually evaluates the effects of his/her choices and actions on others (students, parents, and other professionals in the learning community) and actively seeks opportunities to grow professionally.
10) The student-teacher fosters relationships with school colleagues, parents, and agencies in the larger community to support students, learning and wellbeing.

Modes of Learning Engagement

To move away from theoretical discourses and lectures, the student teachers will be required to be engaged in various kinds of experiences. Every course in the teacher education programme provides specific engagements that are spelt out under each course. However, the nature of the engagement of the student teachers will be of the following kinds.

- **Lecture cum demonstrations**
- **Lecture-Discussion Session:** The teacher educator provides a platform for review of experiences, develops insights into the disciplinary knowledge base, and relates them to school realities.
- **Focussed small group discussions**
- **Focused reading and Reflection:** Student teachers would be led into focussed readings on various themes with questions involving reflections either individually or in small groups.
- **Observation-Documentation–Analysis:** Simulated and real school/community experiences would be arranged for the student teacher to observe, document in the form of record/journal/diary, and analyze to revisit their understandings or develop new insights.
- **Seminar:**Students will undertake thematic/topical study, prepare a write-up, and make a seminar presentation using ICT, followed by open house discussion to enhance their knowledge base and repertory skills in the presentation area.
- **Workshop:** A series of learning experiences in a given performance area would be provided in the form of a workshop engaging them in modelling-practice-feedback sequence to develop specified competencies required for a teacher
- **Case Study:** An in-depth and comprehensive study of a single or few cases would be taken up as per the guidelines provided and submit a study report.
- **Institution Based Practical:** Observing an experienced practitioner, planning-implementing-receiving feedback from peers and supervisor and reflection on one's performance would influence the development of insights, beliefs and attitudes necessary for a teacher. Learning experiences would be provided through several school/institution-based practicum to develop certain professional qualities and competencies. The conceptual and theoretical learning made under various courses would not transfer to the real classroom/school/institutional context unless one makes specific attempts at applying them in relevant contexts. The school /institution-based practical would also include planning and implementing learning experiences and strategies and reflecting on their appropriateness and effectiveness.

Modes of Assessment/ Evaluation - Self, Peers and External.

Pre-service teacher education programme provides inputs that are to be internalized through an active process of assimilation and accommodation. Hence assessment needs to be

formative and summative, quantitative and qualitative by nature. The emphasis will be on a continuous and comprehensive evaluation. The modes of assessment would consist of

- **Self-assessment** with the help of various psychometric and educational assessment inventories.
- **Written tests and assignments** for assessing conceptual understandings and clarity
- **Products** of planning and preparation activities include lesson plan, unit plan, assessment tools, and learning resources.
- **Records/Reports/Reflective Journals and Diaries** maintained by the student teacher of their school-based experiences and project work related to different courses.
- **Seminar presentations** for assessing ability to review, record, reorganize and present their work on thematic/topical study.
- **Laboratory journals/Activity records** for assessing ability to plan and implement laboratory activities on subject specific skills under various pedagogical content courses.
- **Observation** of teaching performance using schedules and rating scales, both in simulated and real classroom contexts, for assessing performance skills and competencies.
- **Records/Reports/Reflective Journals and diaries** maintained by the student's teacher of their school-based experiences and project work related to different courses.
- **Laboratory Journals/Activity records** for assessing ability to plan and implement laboratory activities on subject specific skills under various pedagogical content courses
- **Observation** of the student teachers in various contexts of teacher education such as their participation in seminar, professional attitudes and dispositions.

Scheme of Assessment /Evaluation

The weightage suggested for formative and summative assessments per course are:

a) Theory- Terminal: 60 Marks
b) Sessional work: 40 Marks
c) Practical's (School Internship etc.): 100 Marks

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SEMESTER I

COURSE CODE: EDU 411 **COURSE TITLE: BASICS OF EDUCATION (Core)**				
Teaching Scheme			**Examination Scheme**	**Credits Allotted**
L	T	P	ESE: 60 Marks Internal Assessment: 40 Marks	Theory:03
2	1	0		

		Total:03

Course Prerequisite

Any graduate student who enrolled in the B.Ed. programme can study this course.

Learning Outcomes

After completion of this course, the students will be able to;

1. explain the educational concepts, their premises and contexts that are unique to Education.
2. appreciate the nature and the purpose of Education, their practical ramifications in the school context.
3. reflect on the philosophical reflections and educational thoughts of great educational thinkers
4. elucidate various perspectives about the nature of knowledge in Education and its contribution as a discipline and interdisciplinary
5. inquire into the roles of teacher, school and the community in the changing perspectives of pedagogy
6. review the historical development of Education as a system and its evolving structures
7. analyze the importance of systemic reforms in achieving quality education.

Course Outcomes

The instructor would fulfil the following objectives,

1. To initiate the conceptual understanding of Education and its nature.
2. To acquire Knowledge of the aims of Education and their classification
3. To comprehend the emerging trends in societies with its repercussions on Education.
4. To review the commissions and committees, the system and structure of the school education at different stages.
5. To enhance educational thinkers' ideas and understand the need for quality education to build the nation

COURSE CONTENT

UNIT I	**Fundamentals of Education**	**7 hours**
	Meaning of Education, Education as an evolving concept: ancient to present- Educational organizations in India, Education Policies and commissions, NEP-2020. Concepts in Education and their changing connotations: school, curriculum, teacher, learner, autonomy and control concerning the child and teacher. Shifts in the process of Education: Knowledge giving, didactic and constructivist interpretations. Expansions in modes of Education	
UNIT II	**Aim of Education**	**7 hours**
	Aims of Education-Education for National Development - Economic, Social and Individual, Education for Value development regarding Senior Secondary Stage. Changing aims of Education in the context of globalization.	
UNIT III	**Education and Philosophy**	**7 hours**
	Educational aims as derived from the Constitution of India. Influence of aims of Education on the curriculum and transactional strategies. Ideas of educational thinkers such as Gandhi, Tagore, Aurobindo, Dewey, Krishnamurthy, Friere and Illich	
UNIT IV	**Role of Education**	**7 hours**

	Education as a system, Stages, forms, modes and streams of Education. Evolution of educational network over the past two centuries (the 1800s to 21st century. Role of state-centre: the need for a national system of Education, Predominant concerns of the education system– coordination, quality assurance and feasibility.	
	Role of Stakeholders in Education- Parents, Community, Teachers, Students, Employer.	
UNIT V	**Education for Social Change**	**7 hours**
	Education as an instrument of social change, Socio-cultural influences on the aims and organization of Education. Social acceptability of educational policy and practice. Emerging trendsin societies and their repercussions on Education: globalization and internationalization of Education	
UNIT VI	**Nature of knowledge**	**10 hours**
	Nature of knowledge in Education: concepts, statements, educational implications, metaphors and theories. The emerging Knowledge base in Education. Differences between information, knowledge, belief, and truth. Ways of Knowing and sources of knowledge. Role of culture in Knowing, Transfer of knowledge into action and reflection on learning. Role of knower and known in knowledge transmission and construction. Forms of Knowledgeand basis of categorization of knowledge. Facets of School Knowledge and relationship: local and universal; concrete and abstract; theoretical and practical; contextual and textual; school and out of school.	

Internal Assessment		
CIA*-1	Written examination	
CIA-II	assignments, quiz, presentation, field study, viva-voce etc	
ESE**	Written examination	

Mode of transaction

Lecture method, discussion, group work

ASSIGNMENT

- To make the students prepare an e-content on salient features of NEP - 2020
- Preparation of reports on the state and centrally sponsored schemes of Education

SUGGESTED READINGS

- Govt. of India (1986). National Policy on Education, Min. of HRD, New Delhi. Govt. Of India (1992).
- Programme of Action (NPE). Ministry of HRD. National Education policy 2020.
- Learning without Burden, Report of the National Advisory Committee. Education Act. Ministry of HRD, Department of Education, October 2004.
- National Policy on Education. 1986. Ministry of HRD, Department of Education, New Delhi.
- Seventh All India School Education Survey, NCERT: New Delhi. 2002
- UNDPA. Human Development Reports. New Delhi.
- NCERT (1986). School Education in India – Present Status and Future Needs, New Delhi.
- UNESCO. (2004) Education for All: The Quality Imperative. EFA Global Monitoring Report. Paris.
- National Council of Educational Research and Training. (2005).

REFERENCES

- **Agarwal, J. C. (2010).** Teacher and Education in a Developing Society. Delhi; Vikash Publishing house.
- **Anand, C.L. et al. (1983).** Teacher and Education in Emerging in Indian Society, NCERT, New Delhi.
- **Arulsamy, S. (2014).** Educational Innovations and Management, Hyderabad: NeelkamalPublications.
- **Arulsarmy, S. (2011).** Philosophical and sociological perspectives on Education, New Delhi; Neel Kamal Publications Pvt. Ltd.
- **Bhatia K.K., (2011),** Philosophical and sociological foundations of Education, New Delhi; Kalyani Publishers.
- **Dash, B.N. (2000).** Teacher and Education in the Emerging Indian Society. Neel KamalPublications.
- **Gupta, R. (2011).** Philosophical, sociological and economic bases of education. TandonPublications.
- **Lal, R.B. (2009).** Development of Indian education and us problem. Lal Book depot. **Mrunalini, T. (2011**). Philosophical Foundation of Education. Neel Kamal Publications.
- **Meenakshi Sundaram (2011).** Educational Innovations and Management. Dindigul: Kaviyamala Publishers.
- **Mukherji, SM, (1966).** History of Education in India, Acharya Book Depot, Baroda
- **Mullan, E. (2007).** The Spiritual Exercise of St. Ignatius of Loyola. State University ofNew York Press.
- **Naik, J.P. & Syed, N., (1974).** A Student's History of Education in India, MacMillan, New Delhi.
- **Safaya, (2011).** Development of Education in emerging India and its current problems. Dhanpat Rai Publications.
- **Saxena, S. (2008).** Education in emerging Indian society, Lal Book Depot.
- **Sharma, R. N. (2008).** Education in the Emerging Indian Society. Delhi: Surjeet Publications.
- **Sri Aurobindo Marg. Rasool Abduha G. (1973),** The educational Ideas of Maulana Abul Kalam Azad, Sterling Publishers,

WEBLINKS

https://www.pupilstutor.com
https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf
https://www.pramanaresearch.org/gallery/prj-p914.pdf
https://www.selfstudys.com/sitepdfs/BWD0dejqENcSj1TYEcA6

Online courses

Swayam Courses

Basic Concepts in Education, 6weeks course, Teacher Education, 2 credit by Dr.S. Prakash

Principal, Thiagarajar College Of Preceptors,Madurai – 625009

https://onlinecourses.swayam2.ac.in/cec22_ed28/course

BESC-131: Education: Concept Nature and Perspectives, 16 weeks, Humanities and Social sciences, Tearcher Education, 6 credit course by **Dr Niradhar Dey, School of Education, IGNOUhttps://onlinecourses.swayam2.ac.in/nou22_ed 20/preview?**

MATRIX OF COURSE OUTCOMES WITH PROGRAMME OUTCOMES

•	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10
CLO1	3	2		1	1					
CLO2	3	3	1					2		
CLO3		3	2						3	
CLO4						2	3			
CLO5			3		2		3	3	2	3
CLO6					2			3		
CLO6					3		3	2		

3= High level mapping, 2= Medium level mapping, 1=Low level mapping

COURSE CODE: EDU 412

COURSE TITLE: SECONDARY EDUCATION IN INDIA: STATUS, CHALLENGES AND STRATEGIES (Core)

Teaching Scheme			**Examination Scheme**	**Credits Allotted**
L	T	P	ESE: 60 Marks	Theory:3
2	1	0	Internal Assessment: 40 Marks	
				Total:3

COURSE PREREQUISITE

The student must be familiar with of existing Indian Education system.

LEARNING OUTCOMES

After completion of this course, the students will be able to;

1. Analyse the nature and perspective of Secondary Education.
2. Justify the concept of inclusion in Secondary Education;
3. Critically analyze the curricular and quality assurance concerns of the National Curriculum Framework – 2005 on Secondary Education
4. Analyse initiatives by Rashtriya Madhyamik Shiksha Abhiyan (RMSA) and comprehensive education to improve the quality of secondary Education
5. Acquainted with the quality indicators and strategies for assuring quality education in secondary schools.
6. Survey the roles and functions of different organizations and bodies in ensuring quality education in secondary schools
7. Follow National Professional Standards for Teachers
8. Realize the importance of the shift from conventional to open learning through different platforms.

COURSE OUTCOMES

The instructor would fulfil the following objectives,

1. To understand the concept, goals and nature of secondary Education.
2. To examine the status of the development of secondary Education in India
3. To develop an understanding of the interventions required to solve the problems and issues in imparting quality education in secondary schools.
4. To make them understand the need for open and distance learning at the secondary level.
5. Visualize the role of different organizations and agencies in ensuring quality control.
6. Exhibits understanding of National Professional Standards for teachers

COURSE CONTENT		
UNIT I	**Overview of Senior Secondary Education**	**08 hours**
	Concept, Nature and Purpose of Secondary Education Learning Outcomes at Secondary stage Universalization of Secondary Education (Rashtriya Madhyamik Shiksha Abhiyan), Comprehensive Education Mission Right to Education Act 2009	
UNIT II	**Status of Secondary Education**	**10 hours**
	1. Current Status of Secondary Education (USE) concerning various indicators as per U-DISE 2. National Curriculum Framework for Teacher Education (NCFTE) 2009, 3. Concerns of National Curriculum Framework (Secondary Education)– 2005 4. Mandate for the development of the National Curriculum Framework (NCF) based on the National Education Policy (NEP) 2020	
UNIT III	**Quality Assurance in Secondary Education**	**10 hours**
	1. Concept of Quality, Quality assurance in Secondary Education, 2. Quality Indicators for Secondary Education 3. Strategies for quality improvement in secondary schools, 4. Roles and functions of different organizations and agencies in ensuring Quality Education at Senior Secondary Level—CBSE, State Board of Secondary Education, and Quality Council of India, NCTE	
UNIT IV	**Teachers' Professional development at the Senior Secondary level**	**8 hours**
	1. Aspirations and qualities of Post graduate teachers 2. National Professional Standards for Teachers, **3.** Guidelines for 50 Hours of Continuous Professional Development for Teachers, Head Teachers and Teacher Educators **Based on National Education Policy 2020** 4. International Assessment for ensuring teaching proficiencies: TALIS	
UNIT V	**Open Learning in Secondary Education**	**5 hours**
	1. Concept of Open and distance learning to Secondary Education 2. National Institute of Open Schooling – objectives and functions. 3. Challenges and issues faced in open learning at the secondary level	
UNIT VI	**Other related features**	**4 hours**
	1. Unified District Information System for Education (UDISE) 2. Various types of Schools offer Secondary schools from the recruitment point of view 3. Preservice Teacher Education programme for preparing post-graduate Teachers across the country	
ASSESSMENT		
CIA*-1	Written examination	
CIA-II	Written Exams/ Quizzes /Assignment /Presentations/ Viva-Voce	
ESE**	Written examination	
MODE OF TRANSACTION		

- Lectures, discussions, assignments

ASSIGNMENT

1. Study the status of India in International Assessment.
2. Prepare a poster presentation on open and distance learning in Secondary Education
3. Write an Article on Quality Assurance in Secondary Education.
4. Field visit to schools and understand the ground realities of Secondary Schools
5. Write a paper on Pre service Teacher Education Programme across the country.

SUGGESTED READINGS

- Aggarwal, J.C. (2005). The Progress of Education in free India. Arya Book Depot: New Delhi.
- Chaube, S.P., (2011). History and Problems of Indian Education. Agrawal Publications: Agra.
- Chopra, R.K. (1993). Status of Teachers in India, NCERT, New Delhi.
- Govt. of India (1953). Report of Secondary Education Commission, New Delhi.
- Govt. of India (1966). Indian Education Commission (1964-66) Report. New Delhi.
- Govt. of India (1986/1992). National Policy of Education, 1992, Modification and their POA's MHRD, Deptt. of Education.
- Malhotra, P.L. (1986). School Education in India: Present Status and Future Needs, NCERT, New Delhi.
- National Curriculum Framework on School Education, NCERT (2005).
- NCERT (1997) Code of Professional Ethics for Teachers.
- NCTE (2009). National Curriculum Framework for Teacher Education, New Delhi.

Web Links and Web source (Articles/Reading materials)

https://udiseplus.gov.in/#/home

https://ncert.nic.in/pdf/Guidelines50HoursCpd.pdf

https://ncert.nic.in/pdf/Mandate-NCF.pdf

https://ncert.nic.in/focus-group.php?ln=

https://ncert.nic.in/pdf/publication/otherpublications/Draft_LO.pdf

Online courses (if any)

At present, no online course is available

MATRIX OF COURSE OUTCOMES WITH PROGRAMME OUTCOMES

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10
CLO1	3									
CLO2	3									
CLO3	3									
CLO4	2									
CLO5	2							3		
CLO6	2		3					3	3	
CLO7	2		3					3	3	
CLO8	2								2	

3= High level mapping , 2= Medium level mapping , 1=Low level mapping

SEMESTER II

COURSE CODE: EDU 413

COURSE TITLE: LEARNER AND LEARNING (Core)

Teaching Scheme			Examination Scheme	Credits Allotted
L	T	P	ESE: 60 Marks	Theory:03
2	1	0	Internal Assessment: 40 Marks	
				Total:03

COURSE PREREQUISITE

Any graduate student who enrolled in the B.Ed. programme can study this course. They should have a general idea about the growth and development of learner and factors related to learning.

LEARNING OUTCOMES

After completion of this course, the students will be able to;

1. identify the concept, principles and theories of development
2. demonstrate the skills for using learning processes in real teaching
3. identify constructivist perspective of cognitive development and social context of learning
4. explain different types of Multiple intelligences
5. organize activities for enhancing cognitive processes in learning
6. solve the issues related to mental health and hygiene among students
7. locate the learning difficulties of students and address them

COURSE OUTCOMES

The instructor would fulfil the following objectives,

1. understand the concept about learners' development, its principles, and the theories of development.
2. demonstrate the educational implications of developmental theories of Piaget, Kohlberg and Erickson
3. reflect on their implicit understanding of the nature and kinds of learning
   develop critical understanding about learning processes and skills to use them in real teaching –learning context.
5. develop conceptual understanding about the constructivist perspective of cognitive development and social context of learning, its theories and; to apply these understanding in real life context (teaching-learning context).
6. explore the ways to facilitate the knowledge construction in constructivism.
7. illustrate the different perspective of learning in reference and its pedagogical implications
8. analyze the role of constructive view in the learning process and proposed a way to facilitate the construction of knowledge
9. appreciate the critical role of learner differences and contexts in making meanings, and draw out implications for schools and teachers
10. promote mental health and hygiene among society

COURSE CONTENT

UNIT I	**Growth and Development of Learner**	***10 Hours***
	Learner's Development: Concept, Principles, Stages and Factors affecting the Development. Difference between Growth and Development. Theories of Development: Theory of Cognitive Development: Piaget and Vygotsky, Theory of Moral Development: Kohlberg, Theory of Psycho-Social Development: Erickson.	

UNIT II	**Learning and Motivation**	**7 Hours**
	Learning- Meaning, nature and concept of learning, Factors Influencing Learning- Internal and External**;** Role of the teacher, parents, school and community in addressing various factors influencing learning; Issue of media influences on learning – the Role of parents, teachers and School Management Motivation: Concept and types of motivation (Intrinsic and Extrinsic), Motivation for Learning: Classroom implications	
UNIT III	**Theories of Learning**	**8 Hours**
	Conceptual background and educational implication of learningtheories: Behaviorist Approach: Throndike, Pavlov, Skinner, Cognitive Approach: Kohler and Lewin, Constructivist Approach: Piaget and Vygotsky	
UNIT IV	**Shift in Learning Environment**	**8 Hours**
	Paradigms shift in the learning environment from teacher-centric to learner-centric approach; Distinctions between learning as 'construction of knowledge and learning as 'transmission and reception of knowledge'; Understanding processes that facilitateconstruction of knowledge: (i) Experiential learning and reflection (ii) Social mediation (iii) Individual versus group learning: Self-learning, cooperative and collaborative learning.	
UNIT V	**Understanding Learners**	**10 Hours**
	Understanding the psychology of individual differences; Understanding learners from multiple intelligences perspective with a focus on Gardner's theory of multiple intelligences and its educational implications; Differences in learners based on- predominant 'learning styles' and socio-cultural contexts; Understanding differences based on the range of cognitive abilities-	
	learning difficulties, slow learners and dyslexics, intellectualdeficiency, intellectual giftedness; Catering and attending to individual differences: grouping, individualizing instruction, guidance and counselling, bridge courses, enrichment activities, Infrastructural support	
UNIT VI	**Mental health and hygiene**	**2 Hours**
	Mental health and hygiene: Conceptual background and its significance, Role of teacher to promote mental health and hygiene among students.	
ASSESSMENT		
CIA*-1	Written examination	
CIA-II	Written examination and assignments, presentations, viva-voce etc.	
ESE**	Written examination	
MODE OF TRANSACTION		
Lectures, Seminars, PowerPoint Presentation, Peer-group discussion, Group work, Project		
ASSIGNMENT		

The following activities are only suggestive. The teacher educator can formulate more;

- Critical analysis of classroom instruction in the light of the understandings developed in Units 3 & 4
- The teacher educator/ students can critically examine /investigate/ analyzed and prepare the report for the implementation of learning theories in real learning situations.
- Observation and interaction with children from diverse background and discuss their lived experience regarding learning within school and beyond the school..
- Case study of a learner with behaviour problem/talented child/a learning disabled child/a slow learner/a disadvantaged child
- Study of intelligence of at least five school children and relating it with achievement and other background factors
- Psychology Practical test: Intelligence test, Multiple Intelligence test, learning style.

SUGGESTED READINGS

1. Aggarwal, J.C. (2009). Child Development and the Process of Learning. Delhi, Shipra Publication
2. Aggarwal, J.C. (2008) Essentials of Educational Psychology (2nd Edition). New Delhi: Vikas Publishing House Pvt. Ltd.
3. Chauhan. S. S. (2007) Advanced Educational Psychology (7th Edition). New Delhi**:** Vikas Publishing House Pvt. Ltd.
4. Hurlock B. Elizabeth (1980) Developmental Psychology. New Delhi: Tata McGraw Hill.
5. Mangal, S.K. (2012). Advanced Educational Psychology (2nd Edition). New Delhi: PH1 Learning Pvt. Limited
6. Baron A. Robert (2000) Psychology. New Delhi, Prentice-Hall of India
7. Bower, G.H. and Hilgard, E.R. (1981) Theories of learning. New Jersey: Prentice Hall, Inc. Englewood Cliffs.
8. Chaube, S.P. (2007). Development Psychology. Hyderabad: Neel Kamal Publications Pvt.Limited.
9. Guilford, J.P. (1967). Nature of Human Intelligence, New York: Mc Graw Hill Publishing House Pvt. Ltd.
10. Hergenhahn, B.R. & Mathew H. Olson (2007). Theories of Learning: An Introduction. (7th edition). New Delhi, Prentice Hall of India
11. Santrock, John.W. (2006) Educational Psychology, New Delhi: Mc Graw-Hill Higher Education
12. Schneider, F.W., Gruman, J.A. & Coutts, L.M. (Eds.) (2012). Applied Social Psychology-Understanding and Addressing Social and Practical Problems (SecondEdition) New Delhi: Sage Publications Pvt. Limited
13. Uday Shankar (1983) Advanced Educational Psychology. New Delhi, Oxford University Press.
14. Venkatesan, S. (2004). Children with Developmental Disabilities-A Training Guide for Parents, Teachers and Caregivers. New Delhi, Sage Publications Pvt. Limited.
15. Woolfolk, A. (2014). Educational Psychology, Pearson Education Limited.

MATRIX OF COURSE OUTCOMES WITH PROGRAMME OUTCOMES

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3									

CO2		3						2		
CO3	2		3							
CO4				3			2		1	
CO5				3					2	
CO6					3	3				
CO7				3	2					
CO8							2		3	
CO9							3			3
CO10										3

3- High Level Mapping, 2- Medium Level Mapping, 1-Low level Mapping

COURSE CODE: EDU 414

COURSE TITLE: TEACHING STRATEGIES AND APPROACHES (Core)

Teaching Scheme			Examination Scheme	Credits Allotted
L	T	P	ESE: 60 Marks	Theory:03
2	1	0	Internal Assessment: 40 Marks	

COURSE PREREQUISITE

The pre-requisite for this course is a bachelor's degree in any discipline.

LEARNING OUTCOMES

After completion of this course, the learners will be able to;

1. Critically analyze the elements and process of teaching and learning.
2. Describe and demonstrate proficiency in teaching.
3. Analyze the role and function of the teacher in the pre-active phase,
4. Adopt and apply the various strategies to make the teaching interactive and practical.
5. To decide and imply Individualized Instruction, Small Group or Whole Group Instruction to facilitate the learning of students
6. Able to implement cross-curricular approaches.
7. Analysis of teacher roles and functions in the post-active phase (assessment phase).
8. Critically evaluate the role of the teacher as a professional.
9. Identify his/her social identity and relationship with other agencies and stake holders

COURSE OUTCOMES

The instructor would fulfil the following objectives

1. To develop a basic understanding of teaching and learning.
2. To make them understand elements of teaching proficiency.
3. To be aware of the teacher's role in the pre-active phase.
4. To acquaint them with the various teaching strategies and approaches.
5. To develop a critical understanding of the teacher's role as a professional.
6. To make understand specific features of various approaches used to facilitate learning.
7. Demonstrate their understanding of the role of a teacher at different phases of instruction
8. Transform prospective teachers into proficient professionals.
9. Exhibits understanding of expectations and responsibilities of a teacher and the 'identity as a teacher.

COURSE CONTENT

UNIT I	**Overview of Teaching**	**12 Hours**

	1. Understanding the Teaching and its relation to learning 2. Understanding learner 3. Assumptions underlying teaching, and their influence on teaching 4. Proficiency in teaching; meaning and the factors affecting 5. The Technological Pedagogical Content Knowledge (TPACK)	
UNIT II	**Planning of Teaching (Prepare Phase)**	**8 hours**
	An analysis of teacher roles and functions in the pre-active phase– 1. Visualizing learner readiness, characteristics, the subject matter content and interlinkages, the learning resources, and approaches/strategies. 2. Decision-making on outcomes: establishing general instructional goals, specification of objectives and standards for learning, allocating instructional time for various activities/tasks – instructional time as a variable in education. 3. Decision-making on instructional approaches and strategies as per need and suitability, 4. Preparing for instruction: identifying and selecting available learning resources or developing the required learning resource	
UNIT III	**Implementing Teaching Strategies (InteractivePhase)**	**8 hours**
	An analysis of teacher roles and functions in the interactive phase - facilitating and managing 1. Expository Strategy as an approach to teaching for understanding: Presentation-discussion-demonstration, the Advance Organizer Model; 2. Inquiry Strategy as an approach to teaching for construction of knowledge and thinking skills: Concept Attainment/ Concept Formation, Inductive Thinking-Problem Based Learning/Project Based Learning;	
UNIT IV	**Implementing Teaching Approaches (Interactive Phase)**	**8 hours**
	An analysis of teacher roles and functions in the interactive phase - facilitating and managing 1. Approaches to Organizing Learning - Approaches to Individualized Instruction: Programmed Instruction (Linear and Branching). 2. Small-Group and Whole Group Teaching approaches; Cooperative and Collaborative approaches to learning, Brainstorming, RolePlay and Dramatization, Simulation and Games. 3. Cross Curricular Approach-Art integration and sports integration, Scenario-based teaching-learning	
UNIT V	**Assessment of Teaching (Post Active stage/Assessment Phase)**	**6 hours**
	An analysis of teacher roles and functions in the post-active phase: 1. Assessment of pupil learning: Assessment and generating feedback on all three phases of teaching. 2. Criteria for evaluating teacher/ teaching effectiveness: Using learner achievement as feedback, student feedback.	
UNIT VI	**Professional development of teacher**	**4 hours**

	1. Criteria for professional development in teaching: self-reflection, observation and feedback by peers and teachers. Performance appraisal system. 2. Understanding teacher as a professional: expectations and responsibilities of a teacher, balancing personal aspirations and professional pressures, teacher as an autonomous functionary and a community member, developing an 'identity as a teacher.	

ASSESSMENT

CIA*-1	Written Examination	
CIA-II	Written Exams/ Quizzes /Assignment /Presentations/ Viva-Voce	
ESE**	Written Examination	

MODE OF TRANSACTION

Lectures, Seminars, PowerPoint Presentation, Peer-group discussion, Group work, Assignments, Project, Simulated teaching

ASSIGNMENT

- Write an Essay Teaching is a planned activity.
- Discuss the Proverb "Teaching is a walk in a park but that part is Jurassic Park".
- Prepare a Linear and Branching Programme on any topic.
- Discuss teachers' identity as a teacher in a group.

SUGGESTED READINGS

- Bloom, B S., Englehart M D, Furst E J, Hill W H and Khrathwohl, D. R. (1956, 1964) Taxonomy of Educational Objective Handbook 1, Cognitive Domain, Handbook 2, Affective Domain, LongmanLondon
- Buch, M B and Santharam M R (1972) Communication in Classroom, CASE, Faculty of Ed. & Psy. M S Univ. Baroda
- Davis, Irork (1971) The Management of Learning, McGraw Hill, London
- Jangira N K and Ajit Singh (1982) Core Teaching Skills: The Microteaching Approach, NCERT, New Delhi
- Nagpure, V. (1992) Teacher Education at Secondary Level, Himalaya Publishing House, 'Ramdoot', DrBaleraoMarg, Girgaon, Bombay 400 004
- Sharma, R A (1983) Technology of Teaching; International Publishing House, Meerut

Web Links and Web source (Articles/Reading materials)

https://www.beled.in/relationship-between-teaching-learning-for-beled-exams/
https://www.scholarify.in/teaching-concept-objectives-characteristics-levels/
https://files.eric.ed.gov/fulltext/EJ1245288.pdf
https://studentaffairs.duke.edu/conduct/z-policies/academic-dishonest
https://www.researchgate.net/publication/272620585_Introduction_to_Concepts_of_Teaching_and_Learning
http://shodh.inflibnet.ac.in:8080/jspui/bitstream/123456789/3334/2/02_introduction.pdf
https://physicscatalyst.com/graduation/teaching-definition/
https://egyankosh.ac.in/bitstream/123456789/8501/1/Unit%201.pdf
https://pdfs.semanticscholar.org/3315/2de5a5d575960a90c0d2606c69623ae74a64.pdf?_ga=2.61077285.883789441.1659887524-679162076.1652169840

Short Term course for knowledge and skill enhancement

- Teaching And Learning in General Programs: TALG, By Prof. N J Rao | IISc Bangalore Duration:4 weeks, Category: Multidisciplinary, Faculty Domain – Fundamental, Credit Points:1, Level: Postgraduate
- The foundation of Teaching for Learning: Being a teacher on by Commonwealth Educational Trust on the Coursera portal
- The foundation of Teaching for Learning: Planning for teaching and learning by Commonwealth Educational Trust on the Coursera portal
- The foundation of Teaching for Learning: Introduction and learning by Commonwealth Educational Trust on the Coursera portal

The foundation of Teaching for Learning: Being a professional by Commonwealth Educational Trust on the Coursera portal.

Long term Courses

- BES 123: Teaching and Learning, Duration:16 weeks, Category: Teacher Education, Credit Points: 4, Level: Undergraduate By Dr Gaurav Singh | Indira Gandhi National Open University

MATRIX OF COURSE OUTCOMES WITH PROGRAMME OUTCOMES

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10
CLO1	3				-					
CLO2	3	2			-	3				
CLO3	3	2			-					
CLO4	2			3	-		3			
CLO5	2		3	3	-		3			
CLO6	2			3	-		3			
CLO7	2				-			3		
CLO8	2				-				3	3
CLO9					-				3	3

3- High Level Mapping, 2- Medium Level Mapping, 1-Low level Mapping

SEMESTER III

COURSE CODE: EDU511

COURSE TITLE: LEARNING ASSESSMENT (Core)

Teaching Scheme			Examination Scheme	Credits Allotted
L	T	P	ESE: 60 Marks	Theory:03
2	1	0	Internal Assessment: 40 Marks	
				Total:03

COURSE PREREQUISITE

Student teachers presuppose familiarity with examinations, tests, question papers, learners' progress and reporting the result of learners' achievement. They must also know the psychological principles involved in teaching and learning, various aspects of learner and learning, teaching strategies & approaches, and pedagogy.

LEARNING OUTCOMES

After completion of this course, the learners will be able to;

1. To explain the basic concepts of assessment, measurement, appraisal, and evaluation.
2. To comprehend the associated concepts of assessment for, as & of learning.
3. To train the student teachers to construct various assessment tools for assessing cognitive, affective and performance-based learning.
4. To explore the various innovative assessment practices and strategies in school settings.
5. To make student teachers familiar with measures and practices for interpreting, reporting, and using assessment data to improve learning.
6. To discuss various issues and problems related to assessment and evaluation practices in school settings.

COURSE OUTCOMES

The instructor would fulfil the following objectives

1. Understand the nature of assessment and evaluation and their role in the teaching-learning process.
2. Examine the contextual roles of different forms of assessment in schools.
3. Develop assessment tasks and tools to assess self and learners performance.
4. Examine the issues and concerns of assessment and evaluation practices in schools for all learners.
5. Understand the policy perspectives on examinations and evaluation and their implementation practices.
6. Apply assessment & evaluation tools for effective assessment & evaluation purpose during teaching learning process.
7. Trace the technology-based assessment practices and other trends at the international level.

COURSE CONTENT

UNIT I	**Basics of Assessment**	**8 hours**

	Meaning of Assessment, Measurement, Tests, Examination, and Evaluation and their interrelationships. Classification of assessment: based on purpose (prognostic, formative, diagnostic and summative), scope (teacher made, standardized), attribute measured (achievement, aptitude, attitude, etc.), nature of information gathered (qualitative, quantitative), mode of response (oral and written; selection and supply), nature of interpretation (norm-referenced, criterion-referenced) and context (internal, external).	
UNIT II	**Reforms in the Assessment**	**8 hours**
	A paradigm shifts in the assessment: reforms in the assessment & examinations according to NEP, 2020: 360 degree of Assessment, School Based Assessment, Self-assessment, Assessment by teachers, peer and parents, Holistic Progress Card etc. Assessmentfor diverse learners.	
UNIT III	**Various Forms of Assessment**	**8 hours**
	Meaning of assessment for learning, assessment of learning and assessment as learning, need for continuous, formative and diagnostic assessment, Assessment Tools- Observation, Use of Projects, Assignments, Work sheets, Competency Based Assessment; Practical work, Performance-based activities, Assessment of Group Processes, Portfolio Assessment – its meaning, scope, and uses.	
UNIT IV	**Assessment Procedure**	**8 hours**
	Dimensions of learning: cognitive, affective and performance, Assessment of cognitive learning: Construction of a question paper, Consideration of what and why to assess (content and objectives), weightage to content, objectives, allocation of time; Preparation of a blue print, Construction/selection of items; Guidelines for construction of test items-different types –multiple choice/multiple responses, short answer, concise answer and essay type, assessment of higher-order thinking skills Development of Rubrics. Agencies of Assessment in India: National Testing Agency (NTA), National Assessment Center etc.	
UNIT V	**Feedback Procedure of Assessment**	**7 hours**
	Analysis and Interpretation of Students' Performance, Use of Feedback for teachers, students, parents, and administrators, Assessment of affective learning: attitude and values, interest, self-concept; items and procedures for their assessment, Assessment of Performance: tools and techniques for assessment of skills, Transforming assessment for optimizing learning and development of all students.	
UNIT VI	**Trends in Assessment**	**6 hours**
	Existing Practices: Unit tests, half- yearly and annual examinations, semester system, Issues and Problems: Marking Vs Grading, Objectivity Vs Subjectivity, Trends in assessment and evaluation: school-based assessment, online examination, technology-based examinations.	

ASSESSMENT		
CIA*-1	Written examination	
CIA-II	Written examination assignments and presentations, project work, viva-voce etc.	
ESE**	Written examination	

MODE OF TRANSACTION

Lecture-cum-discussions, Workshop Sessions, Assignments, Presentation by Students etc.

ASSIGNMENT

- Planning of achievement test and other assessment tools,
- School visits followed by a presentation on evaluation practices in schools
- Presentation of papers on issues and concerns/trends in assessment and evaluation
- Presentation of documents on examination and evaluation policies

SUGGESTED READINGS

- Carr, J.F., & Harris, D.E. (2001). Succeeding with Standards: Linking Curriculum, Assessment, and Action Planning. Alexandria, VA, USA: Association for Supervision and Curriculum Development.
- Chauhan, C.P.S. (2019). Emerging Trends in Educational Evaluation. New Delhi, Neha Publishers & Distributors
- Crockett, Lee Watanabe & Churches, Andrew (2016). Mindful Assessment: The 6 Essential Fluencies of Innovative Learning (Teaching 21st Century Skills to Modern Learners), Bloomington, Indiana: Solution Tree Press.
- Gupta, Rainu (2016). Measurement, Evaluation and Assessment for Learning, New Delhi, Shipra Publication
- Guskey, T.R., & Bailey, J.M. (2001). Developing Grading and Reporting Systems for Student Learning. Thousand Oaks, CA. USA, Corwin Press.
- Mangal S.K. &Mangal, S. (2019). Assessment for Learning, New Delhi, PHI Learning Pvt. Ltd.
- Natrajan V. and Kulshreshta S.P. (1983). Assessing non-Scholastic Aspects-Learners Behaviour. New Delhi: Association of Indian Universities.
- Popham, James W. (2011). Classroom Assessment: What Teachers Need to Know, 6thEdition, Boston, MA USA, Allyn& Bacon.
- Singh A. K. (2019). Tests, Measurements and Research Methods in Behavioural Sciences. New Delhi, Bharti Bhawan Publisher

MATRIX OF COURSE OUTCOMES WITH PROGRAMME OUTCOMES

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10
CLO1	3							3		
CLO2	3				3	3		3		2
CLO3	3		3					3	3	
CLO4			3	3				3		2
CLO5								3		
CLO6					3			3		
CLO7						3		3		

3= High level mapping, 2= Medium level mapping, 1=Low level mapping

COURSE CODE: EDU 512
COURSE TITLE: PEDAGOGY OF SCIENCE

Teaching Scheme			Examination Scheme	Credits Allotted
L	T	P	ESE: 60 Marks	Theory: 03
2	1	0	Internal Assessment: 40 Marks	
				Total: 03

COURSE PREREQUISITE

Any student teachers who are enrolled in Integrated M.Sc. B.Ed. Program can study this Course. Student teachers must have some familiarity with general science, various terms, concepts and theories of science. They must also have the knowledge of psychological principles involved in teaching and learning, multiple aspects of learner and learning, and various teaching strategies & approaches.

LEARNING OUTCOMES

After completion of this course, the learners will be able to;

1. Understand the concept, meaning, nature and scope of science and reforms in the school science.
2. Understand and explore the scope and process of science.
3. Develop a pool of teaching-learning resources for teachers as professionals-organizations, websites, publications, etc.
4. Improve students' teacher, planning, implementation & reflection in teaching, assessment & feedback practices of science.
5. Reflect, analyze and implement in a better way what they have learned from the course and how they hope to apply it in their future classroom.
6. Exhibit certain professional skills useful for teaching science.

COURSE OUTCOMES

The instructor would fulfil the following objectives;

1. To develop insight on the meaning and nature of science.
2. To explore the Landmarks and Contribution of Indian Scientists.
3. To formulate and write the Learning objectives of science teaching at secondary and senior secondary levels
4. To explain the basic concept of pedagogy.
5. To describe the associated concepts of pedagogy of science.
6. To do the pedagogical analysis for the content of science.
7. To prepare and Instructional plan and unit plans at different levels incorporating problem-solving and the use of manipulates and technology.
8. To plan and use of laboratory settings in teaching-learning of science at secondary level.
9. To prepare, explain, and use both traditional and alternative ways of assessment andFeedback.
10. To demonstrate the use of various teaching and motivational strategies and apply them intheir future classroom.

COURSE CONTENT

UNIT I	**Fundamentals of Science**	**10 Hours**
	Meaning, Nature & Scope of science; Historical evolutionof science in east and west); Development of Science in India: Landmarks and Contribution of Indian Scientists,Correlation of Integrated Science with other Subjects.	
UNIT II	**Aims and Objectives of Science Teaching**	**10 Hours**
	Meaning and concept of Aims and Objectives, Types of Learning Objectives, Learning objectives of Science teaching at secondary and senior secondary levels. Taxonomy of Objectives; Cognitive, Affective and Psycho- motor domain.	

UNIT III	**Basics of Science Pedagogy**	**10 Hours**
	Concept of Pedagogy, Operations of pedagogical analysis, Pedagogical analysis of Science Curriculum, Content Analysis, Formulation of Objectives, Teaching-Learning Experiences, & Assessment.	
UNIT IV	**Planning for Science Teaching**	**10 Hours**
	Unit Planning, Lesson planning: Meaning, Need & Steps, Development of Teaching skills, Micro teaching, Simulation teaching, Role Playing.	
UNIT V	**Learning Resources**	**10 Hours**
	Meaning and types of teaching-learning resources, Appropriate teaching-learning resources in Science, Improvised Apparatus, ICT Enabled resources, Integration of Arts; Project, Plays, Toys, Models, Cartoons, & Graphics etc. Science laboratory; Planning and organization of Science-lab activities.	
UNIT VI	**Assessment and Feedback**	**10 Hours**
	Meaning, Nature and Scope of Assessment, Forms of Assessment; Assessment of, for and as learning, Construction of Achievement test in science, Diagnostic testing & remedial teaching. Feedback; Meaning, ways and importance.	
ASSESSMENT		
CIA*-1	Written examination – **20 Marks**	
CIA-II	Written Exams/ Quizzes /Assignment /Presentations/ Viva-Voc- **20 Marks**	
ESE**	Written Examination of Complete Course - **60** Marks	

MODE OF TRANSACTION

Lecture-cum-discussions, Tutorials, Workshop Sessions

ASSIGNMENT

- Reflection on Pedagogical analysis of science curriculum
- Assignments on Unit Planning and Lesson Planning.
- Presentation of paper on the issues related to science pedagogy
- Construction of Unit tests achievement test
- Group discussions, and dialogue on the themes
- Seminars and presentations

SUGGESTED READINGS:

- Albert, Paul (2017). Pedagogy of Physical Science. New Delhi: Blue Rose Publishers.
- Chauhan. SS (1985). Innovation in Teaching-Learning Process, New Delhi, Vikas Publishing House.
- Das, R.C (1985), Science Teaching in school, New Delhi, Sterling Publishers Pvt. Ltd.,
- Jangira. NK &Ajit Singh (1982). Core Teaching Skills, The Micro-teaching Approach,New Delhi: NCERT.
- Kochhar, SK (2003). Methods and Techniques of Teaching. New Delhi: Publishers Pvt.Ltd..
- Kohli, V.K. (1998). How to Teach Science. Ambala: Vivek Publishers.
- Kulshrestha, S.P., Singh, Gaya (2013). Teaching of Physical Science. Meerut: Raj Printers
- Mangal, S.K., & Mangal, Shubhra (2018). Pedagogy of Physical Sciences. Meerut: International Publishing House
- NCERT. (2006). Position paper on Teaching of Science. New Delhi: NCERT

- NCF (2005). National Curriculum Framework. New Delhi: NCERT.
- NCERT (2012) Source book on Assessment in Science Classes VIVIII. New Delhi.
- Radha Mohan. (2016). Teaching of Physical Science. New Delhi: Neel Kamal Publishers.
- Rajasekar, S. (2016). Methods of Teaching Physical Science. New Delhi: Neelkamal Publishers
- Sharma, R.C. (2006). Modern Science Teaching. New Delhi: Dhanpat Rai Publishing Company
- Siddiqui N.N. and Siddiqui M.N. (2000). Teaching of Science Today Tomorrow. NewDelhi: Doaba House.

Web Links:

- http:/www.tc.columbia.edu/mst/science.ed/courses.asp.
- http:/www.edu.uwo.ca
- https://pib.gov.in/PressReleasePage.aspx?PRID=1668450
- https://www.learningclassesonline.com/2020/10/pedagogy-of-science.html

Journal Articles/ Papers:

- Munck, M. (2007). Science Pedagogy, Teacher Attitudes, & Student Success. *Journal of Elementary Science Education,* Department of Curriculum & Instruction, College of Education, Western Illinois University,19(2) , pp. 13-24.
- Osborne, J. (2007). Science Education for Twenty-First Century. *Eurasia Journal of Mathematics, Science & Technology Education*, 3(3), 173-184, https://doi.org/10.12973/ejmste/75396
- Cobern, W.W., Schuster, D., Adams, B., Skjold, B.A.,Muğaloğlu, E. Z.,Bentz,A.&Sparks, A.(2014).Pedagogy of Science Teaching Tests: Formative assessments of science teaching orientations,*International Journal of Science Education*,36:13,2265- 2288,DOI: 10.1080/09500693.2014.918672

MATRIX OF COURSE OUTCOMES WITH PROGRAMME OUTCOMES

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3									
CO2		3			2		1			
CO3			3							
CO4	3									
CO5	3									
CO6							3		3	
CO7	3									
CO8	3									
CO9	3									
CO10		3								

3= High level mapping , 2= Medium level mapping , 1=Low level mapping

COURSE CODE: EDU513
COURSE TITLE: PEDAGOGY OF SOCIAL SCIENCE (Core)

Teaching Scheme			Examination Scheme	Credits Allotted
L	T	P	EoSE: 60 Marks	Theory:03
2	1	0	Internal Assessment: 40 Marks	
				Total:03

COURSE PREREQUISITE

Any graduate student who enrolled in the B.Ed. programme can study this Course. Thestudent should have graduated from social science discipline.

LEARNING OUTCOMES

After completion of this course, the learners will be able to;

1. Explain the fundamentals of social science discipline
2. Relate the contexts and concerns of social sciences
3. Correlate social science with other disciplines
4. Plan the teaching experiences
5. Implement various teaching methods

COURSE OUTCOMES

The instructor would fulfil the following objectives;

1. Understand the fundamentals of social science discipline
2. Develop an understanding related to contexts and concerns of social sciences
3. Correlate social science with other disciplines
4. Plan and organize various teaching experiences
5. Use different methods for teaching of social science
6. Organize fieldtrips and clubs for social science teaching

COURSE CONTENT

UNIT I	**Fundamentals of Social Science discipline**	**7 hours**
	Meaning, nature and scope of social science, Emergence of social science discipline, concept of social science and social studies. Aims and objectives of teaching social science at secondary level	
UNIT II	**Contexts and Concerns of Social Sciences**	**7 hours**
	Contexts of social sciences: Socio cultural Context, Learner Context, Context of Change and Development in Education Concerns of Social Sciences: Balancing between Mainstream Knowledge and Local Knowledge Shifting from Subject based approach to Concept Attainment	
UNIT III	**Disciplines of Social Sciences and their Interrelationships**	**7 hours**
	Nature of Different Disciplines of Social Sciences : history, geography, Political science, economics Relationship of Social Sciences with Other Disciplines: Language and literature, mathematics, Sciences, Art and Aesthetics, Work	

	Experiences, health Education	
UNIT IV	**Planning and Organizing of Teaching learning experiences**	**15 hours**
	Blooms taxonomy, Writing instructional objectives Content Analysis Annual Plan in Social Sciences Unit Planning : Meaning of Unit Plan ,importance, Steps for the Preparation of Unit Plan, advantages and disadvantages Lesson Planning : Meaning and Definition, Procedure and Planning for Content, Methods, Media and Evaluation , Steps for Preparing a Lesson Plan	
UNIT V	**Methods Techniques And Learning Resources**	**15 hours**
	Lecture Method: When to use lecture method, how to make lecture effective, Merits and Demerits of using lecture method Project Method: principles of project, steps followed in project method, advantages , disadvantages Discussion: role of teacher, advantages and disadvantages Questioning Technique: Debate : procedure to conduct debate, advantages, disadvantages Scrapbook Learning Resources for Teaching Social Science: Realia and Diorama, Models, Charts , Graphs Maps and Globes ,Time-lines, ICT	
UNIT VI	**Making learning holistic, integrated, enjoyable & Engaging**	**9 hours**
	Experiential Learning to students Field Trips: Procedure for conducting field trips , advantages , Disadvantages ,Points to be kept in mind while conducting field trip Social Science Clubs : Organization of the club , Merits of social science club, Activities for social science club	

ASSESSMENT		
CIA*-1	Written examination	
CIA-II	Written Exams/ Quizzes /Assignment /Presentations/ Viva-Voc	
ESE**	Written examination	

MODE OF TRANSACTION

Lecture-cum-discussions, Workshop Sessions, Assignments, Presentation by Students

ASSIGNMENT

- Reflection on Pedagogical analysis of social science curriculum
- Assignments on Unit Planning and Lesson Planning.
- Identifying and conducting at least 05 experiments/demonstrations from classes 6-10syllabus individually or in small groups
- Presentation of paper on the issues related to social science pedagogy
- Construction of Unit tests.

SUGGESTED READINGS

- Bawa, M.S. (ed.) (1996), Evaluation in Economics: Teachers' Handbook, Institute of Advanced
  Studies in Education, Department of Education, University of Delhi.

- Chauhan. SS (1985).Innovation in Teaching-Learning Process, New Delhi, Vikas Publishing House.
- Jangira. NK &Ajit Singh (1982).Core Teaching Skills, The Micro-teaching Approach, New Delhi: NCERT.
- Kochhar, SK (2003).Methods and Techniques of Teaching. New Delhi: Publishers Pvt.Ltd..
- Kulshrestha, S.P., Singh, Gaya (2013).Teaching of Physical Science. Meerut: Raj Printers
- Mangal, S.K., &Mangal, Shubhra (2018).Pedagogy of Physical Sciences. Meerut: International Publishing House
- NCF (2005). National Curriculum Framework. New Delhi: NCERT.
- Newlands, David (ed.) The Handbook for Economics Lecturers, http://www.economics.ltsn.ac.uk
- Srinivasan, M,V. Teaching Economics in India. New Delhi: NCERT
- Sivarajan, K & Faziluddin,A. (2003). Methodology of Teaching and Pedagogic Analysis. Calicut University, Calicut.

MATRIX OF COURSE OUTCOMES WITH PROGRAMME OUTCOMES

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3									
CO2	3									
CO3	1	3								
CO4			3	2						
CO5			3	2	2					
CO6							3			2

3= High level mapping, 2= Medium level mapping, 1=Low level mapping

SEMESTER IV

COURSE CODE: EDU 514

COURSE TITLE: CLASSROOM ORGANIZATION AND SCHOOL MANAGEMENT (Core)

Teaching Scheme			Examination Scheme	Credits Allotted
L	T	P	ESE: 60 Marks	Theory:03
2	1	0	Internal Assessment: 40 Marks	
				Total:03

COURSE PREREQUISITE

Students enrolled for graduate in education course course and any learner who have an idea about classroom wants to understand about classroom organization and school management.

LEARNING OUTCOMES

After completion of this course, the learners will be able to;

1. Organize their classroom well.
2. Create a conducive classroom climate in their classes.
3. Identify the different leadership styles of any administrator.
4. Manage the behaviours of the students in classrooms.
5. Manage time in the classroom effectively.
6. Prepare day-to-day schedules in schools.
7. Prepare a timetable and other related records
8. Develop a good relationship with all stakeholders in the school to establish goodwill.
9. Apply the behavioural management strategies in the school when going for an internship.

COURSE OUTCOMES

The instructor would fulfil the following objectives

1. To develop a basic understanding of a well-organized classroom.
2. To make them understand elements of classroom climate.
3. To be aware of the administrator's leadership role in building the tone of the school.
4. To develop an understanding of behavioural management strategies in the school.
5. To acquaint them with the various school management techniques.
6. To develop a critical understanding of the Physical resources and their procurement, mobilization and management.
7. To make understand specific features of the day-to-day schedule, time table and otherrecords
8. To transform prospective teachers into proficient classroom organizer and school leaders and administrators.
9. To exhibits understanding of expectations and responsibilities of a teacher in deciding "toneof school".

COURSE CONTENT

UNIT I	**Overview of Classroom Organization**	**5 hours**
	1. Concept of Classroom Organization and its various types;smart classroom, distributed classroom, virtual classroom 2. Organization of Space and learning resources; Display areaand other facilities within the classroom 3. Concept of classroom community and building of theclassroom community	
UNIT II	**Classroom Management**	**8 hours**
	1. Classroom management – concept, need and approaches Establishment of routines, rules and procedures, 2. Roles of students in a classroom – leader, follower and non- participant, 3. Role of a teacher in classroom management – the relationship between leadership styles of a teacher and classroom discipline, 4. Time management in a classroom	
UNIT III	**Behaviour Management**	**6 hours**
	1. Managing behaviour problems in a classroom – Preventative, Supportive and Corrective. Common mistakes in classroom behaviour management., 2. Punishment and its legal implications – the rights of a child in	

	the Context of WHO documents and NCPCR	
UNIT IV	**School Climate and Environment**	**8 hours**
	1. School climate: Concept and Characteristics (conducive, learner-friendly, inclusive, vibrant), Relation between school policy and school climate. 2. School Environment: concept (as an institution with an environment of its own and conducive School Environment), Factors affecting School Environment 3. Physical resources in a school (**(in consideration of inclusiveness) and its management**- physical space (building) with adequate classroom space, fine furniture, learning resources such as the labs, library, sports field, staff rooms, restrooms, etc. Maintenance, Optimum utilization with intent or schedule, streamlining ways of using the facilities: coordination and sharing	
UNIT V	**Role of Headmaster and Techer in the school**	**10 hours**
	1. Role of Headmaster: Administrative, Academic, Team Building, the Leadership style of the headmaster in constituting a conducive school environment 2. Teacher Role: Promoting self-esteem among students, Team Work. 3. Teacher self-assessment and accountability (importance of feedback from different sources), 4. Professional Learning Communities (Online Communities)for teacher development	
UNIT VI	**School Functioning**	**8 hours**
	1. Planning for the school: annual and long term; yearly school calendar, 2. Day-to-day schedules- timetable, notifications, announcements, Regular documentation of events and activities, Collaborating with different agencies, 3. Staff Meetings, a forum for sharing, review and further planning, Regular documentation of events and activities, 4. Mechanisms that promote the good relationship of school andteacher with parents and community	

ASSESSMENT

CIA*-1	Written Examination	
CIA-II	assignments, quiz, presentation, field study	
ESE**	Written Examination	

MODE OF TRANSACTION

Lecture, discussion, brainstorming

ASSIGNMENT

- Visit a school and prepare a report on the physical infrastructure of that school.
- Conducting survey and identify the leadership style of the headmaster in Schools and its impact on the staff members

- Go through the report of NCPCR (National Commission for protectionfor child rights) and prepare an essay on corporal punishment.
- Suggest a strategy for conducting an effective staff meeting
- Review the school time-table planning and its effectiveness towardsattaining academic expectations laid by National Curriculum Framework
- Prepare a plan of action to be implemented during the next three years for improving the functioning of the school

SUGGESTED READINGS

- Alka, Kalra (1977) Efficient School Management and Role of Principals, APH Publishing Corporation, New Delhi.
- Bagley, Classroom Management, New York: Macmillan
- Buch, T (et al.) (1980) Approaches to School Management, Harper & Row Publishers, London.
- Campbell, R F., Corbally, J E and Nystrand, R O.(1983). Introduction to Educational Administration, (6thed), Allyn and Bacon, Inc., Boston Blumberg, A & Greenfield, w (1986) The effective principal, Allyn& Bacon, London.
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- Khan, M S (1990) Educational Administration, Asia, Publishing House, New Delhi.
- Marsh, C. (2000). Handbook for Beginning Teachers.Second Edition. Pearson Education: Australia.
- Naik, J P (1970) Institutional Planning, Asia Institute for Educational Planning and Administration, New Delhi.
- Sushi, T et al. (1980) Approaches to school management, London: Harper & Row.
- Vashist, Savita (Ed)(1998) Encyclopedia of School Education and Management, New Delhi, Kamal Publishing House.

Web Links and Web source (Articles/Reading materials)

https://www.academia.edu/35732644/Brief_of_concept_of_classroom_management_and_organization_1_Classroom_Management_Meaning_of_Classroomhttps://student.unsw.edu.au/path-avoiding-plagiarising 3
https://www.open.edu/openlearncreate/mod/page/view.php?id=155049
https://www.aiou.edu.pk/SoftBooks/6403.pdf

Online courses (if any) Swayam Portal: Currently, no Course is available on the Swayam Portal

MATRIX OF COURSE OUTCOMES WITH PROGRAMME OUTCOMES

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10
CLO1	3	3								
CLO2	3	2	3							
CLO3	3	2								
CLO4	2	3	3		3		3		3	3
CLO5	2	3					3			

CLO6	2	3					3			
CLO7	2	3						3		
CLO8	2	3			3				3	3
CLO9	2	3	3		3				3	3

3= High level mapping, 2= Medium level mapping, 1=Low level mapping

COURSE CODE: EDU 515

COURSE TITLE: PEDAGOGY OF MATHEMATICS (Core)

Teaching Scheme			Examination Scheme	Credits Allotted
L	T	P	ESE: 60 Marks	Theory:03
2	1	0	Internal Assessment: 40 Marks	
				Total:04

COURSE PREREQUISITE

Student teachers should be familiar with the nature, dimensions, curriculum and concepts of Mathematics at various level of Education. In addition, they must know the psychological principles involved in teaching and learning, multiple aspects of learner and learning, and various teaching strategies & approaches. And they must also have an understating of different and introductory information about the teaching-learning process.

Learning Outcomes

After completion of this course, learners will be able to:

1. describe the nature, aims, objectives and values of the teaching Mathematics.
2. define the contributions of Indian Mathematicians.
3. examine teaching by analyzing classroom interactions and the interplay among mathematics, classroom tasks, teaching, and students' thinking and learning methods.
4. develop the own understanding of what mathematics is, how students learn mathematics, and how to analyze students' mathematical thinking,
5. describe planning of teaching Mathematics for day-to-day teaching.
6. familiarize yourself with current curricular trends, and foster a community of learners that includes ALL students.
7. develop a repertoire of teaching and assessment strategies that is congruent with students' beliefs regarding mathematics,
8. trace & use the technology-based pedagogy, assessment practices and other trends at the national & international level.
9. develop professional dispositions for teaching through the demonstration of professional attitudes and work habits as well as the identification of professional organizations and professional development resources.
10. reflect on what they have learned from the course and how they hope to apply it in their future classroom.

Course Outcomes

The instructor will fulfil the following objectives;

1. To elucidate the describe the nature, aims, objectives and values of the teaching Mathematics and define the contributions of Indian Mathematicians.
2. To comprehend the associated concepts of the teaching of Mathematics.

3. To explore what mathematics is, how students learn mathematics, and how to analyze students' mathematical thinking,
4. To train the student-teacher for a repertoire of teaching strategies that is compatible with students' beliefs regarding Mathematics,
5. To make familiar with current curricular trends and foster a community of learners that includes ALL students.
6. To plan for teaching Mathematics.
7. To discuss various issues and challenges related pedagogy of Mathematics.
8. To organize, explain, and use both traditional and alternative assessments;
9. To motivate for professional development.
10. Demonstrate the use of various teaching and motivational strategies and what they have learned from the course, and how they hope to apply it in their future classroom.

COURSE CONTENT

UNIT I	**Nature of Mathematics Discipline**	**6 Hours**
	Meaning, Nature, scope and significance of Mathematics in the school curriculum, Aims, Objectives and values of teaching Mathematics at school level, Correlation of Mathematics with other subjects, Contributions of Indian Mathematicians (Aryabhata, Bhaskara, Brahmagupta, Ramanujan, Shakuntala Devi).	
UNIT II	**Holistic, Integrated and Enjoyable Mathematics Learning**	**14 Hours**
	Meaning and aspects of a concept, Concept mapping, Mind mapping, Methods of Mathematics teaching: Learning by Exposition, Inductive-Deductive, Project, Teaching Problem Solving in Mathematics, Learning by discovery, Laboratory Method, Activity-Based Method, Project Method etc. Art & Sports integrated Mathematics Learning, Group work and cooperative or collaborative strategies, joyful learning and teaching of Mathematics, Techniques of Teaching Mathematics: Oral, Written, Assignment, Drill Work & Supervised Study etc. Learning to develop reasoning, meta-cognitive/reflective skills etc.	
UNIT III	**Learning Mathematics for all**	**8 Hours**
	Learning Mathematics for all, Mathematics for the students with learning difficulties, Characteristics of students of high ability and unsuccessful learners, supplementary learning resources, use of technology to meet diverse needs of learners, institutional programmes for gifted in mathematics.	
UNIT IV	**Planning of teaching Mathematics**	**14 Hours**
	Blooms' Taxonomy, Writing objectives in behavioral terms, Year/Semester Planning, Unit Planning, Mathematics teaching at Micro and Macro level, Basic Skills of Teaching Mathematics, Lesson planning-need and importance, various forms of lesson plans. Pedagogical & Content Analysis of School Mathematics, Enhancing Professional Competencies as a Mathematics Teacher, Professional Development of Mathematics Teachers.	
UNIT V	**Assessment**	**10 Hours**
	Construction of appropriate test items, Construction of unit & achievement tests, Diagnosing Basic Causes for Difficulties in Learning Concepts, Planning, Implementing and Evaluating Remedial Teaching Strategies Based on the Perceived Causes,	

	Self-Assessment & Peer Assessment in Mathematics.	
UNIT VI	**Learning Resources in Mathematics**	**8 Hours**
	Meaning, types, functions, preparation andutilization of learning resources in Mathematics: Mathematics Textbook, Models; The Mathematics Laboratory – planning and organizing lab activities, Mathematics outside the Classroom. Integration of ICT with content and pedagogy; Calculators and Computers, Graphic calculators, Mathematics Learning Software (Cabri-geometry, Geometer'ssketchpad etc.)	

ASSESSMENT

CIA*-1	Written Exams	
CIA-II	Written Exams/ Quizzes /Assignment /Presentations/ Viva-Voce	
ESE**	Written Exams	

MODE OF TRANSACTION

Learning by Expositions, presentations, projects, seminars, Focused reading and reflection, collaborative & cooperative strategies, critical pedagogy, paraphrasing, reflection and brainstorming session on educational studies related concepts, critical pedagogy, dialogue and open discussion and blended learning approach.

ASSIGNMENT

- Stating instructional objectives & specific objectives for mathematics lessons and identifying learning outcomes
- Designing learning activities, appropriate strategies; selecting/preparing learning resources; assessment techniques and tools, etc.
- Critical analysis of moves and teaching skills used in a lesson taught in a class or in a lesson plan
- Planning, construction & implementation of appropriate strategies and appropriate test for teaching mathematical concepts and generalizations in simulated and real classroom situations
- Preparation of at least a lesson plan based on each of the strategies of teaching proof, and problem solving and practice of the strategies in simulated/real classroom situations
- Construction of a unit test, a diagnostic test and an achievement test in mathematics
- Development of a teaching & learning aids on any topic in mathematics and the procedure for using it
- Demonstration on the basic Teaching Skills
- Case study of a gifted/ talented and an unsuccessful learner in the class Presentation of papers on issues related with science.
- Write a reflection on the course on what they have learned from the course and how they hope to apply it in their future classroom

SUGGESTED READINGS

- Aggarwal S. M. (2014) Course in Teaching of Modern Mathematics, New Delhi: Dhanpat Rai & Co.
- Anderson, L. W., &Krathwohl, D. R. (Eds.). (2000).A Taxonomy for Learning, Teaching, and Assessing: A Revision of Bloom's Taxonomy of Educational Objectives. New York: Longman
- Areekkuzhhiyil, Santosh (2011). Instructional Approaches: A Manual for Professional Practitioners,Hyderabad.

- Bhaitia, S.K. & Jindal Sonia (2016) A Textbook of Curriculum, Pedagogy & Evaluation, New Delhi: Paragon International Publisher.
- Bloom, S. (1956). Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain. New York: David McKay Co Inc.
- Chambers, Paul &Timlin, Robert (2019).Teaching Mathematics: Developing as a Reflective Secondary Teacher. New Delhi: Sage Publication.
- Das, SushmitaSutradhar (2012). A Study of Mathematics Curriculum for School Education since Last Two Decades and its Implementation (For Presentation on National Meet on Mathematics Celebration of National Year of Mathematics -2012, by NCERT, New Delhi w.e.f. 20th to 22nd Dec' 2012), retrieved from http://www.ncert.nic.in/pdf_files/17.Mathematics%20Curriculum%20for%20School%20Education%20_16.12.pdf
- Ghosh , Jonaki B (2012) Learning Mathematics in Secondary School: The Case of Mathematical Modelling Enabled by Technology, paper submitted for 12th International Congress on Mathematical Education, July, 2012, COEX, Seoul, Korea , retrieved from https://www.mathunion.org/fileadmin/ICMI/Conferences/ICME/ICME12/www.icme12.org/upload/submission/1854_F.pdf
- IGNOU BES-143, Notes on Pedagogy of Mathematics, retrieved from http://egyankosh.ac.in/bitstream/123456789/46788/1/BES-143B1-E.pdf
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- Ramanujam, R. &Subramaniam K. [Edited](2012)Mathematics Education in India Status and Outlook , Mumbai ; Homi Bhabha Centre for Science Education, Tata Institute of Fundamental Research.
- Ramanujam, R. &Subramaniam K. [Ed.](2012)Mathematics Education in India Status and Outlook , Mumbai ; Homi Bhabha Centre for Science Education, Tata Institute of Fundamental Research.
- Rao, N.M. (2016). A Manual of Mathematics Laboratory. New Delhi: Neelkamal Publications.
- Reeve, W.D. (1954). Mathematics for the Secondary School. New York: Holt, Rinehart and

Winston, Inc.
- Russel, J. (2007). Teaching of Mathematics. New Delhi: Campus Books International.
- Shankaran and Gupta, H.N. (1984). Content- cum – Methodology of teaching Mathematics. New Delhi: NCERT.
- Yashpal Committee Report (1993). Learning Without Burden, New Delhi: Report of the National Advisory Committee Appointed by the Ministry of Human Resource Development.

Periodicals

- Educational Studies in Mathematics
- International Journal of Science and Mathematics Education
- Journal of Research in Mathematics
- Journal of Mathematics Teacher Education
- Mathematics Education Research Journal
- Mathematics Teaching
- Research in Mathematics Education
- School Science and Mathematics
- Teaching Children Mathematics
- The Mathematics Teacher

MATRIX OF COURSE OUTCOMES WITH PROGRAMME OUTCOMES

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3									
CO2	3									
CO3		3	2	2	2					
CO4	3									
CO5				3	2	2				
CO6			3	3						
CO7	3			3			3	3	3	1
CO8				3		3		3		
CO9					2				3	2
CO10				3	2				3	

3= High level mapping , 2= Medium level mapping , 1=Low level mapping

COURSE CODE: EDU 516
COURSE TITLE: PEDAGOGY OF PHYSICS (Core)

Teaching Scheme			**Examination Scheme**	**Credits Allotted**
L	T	P	EoSE: 60 Marks Internal Assessment: 40 Marks	Theory:03
2	1	0		
				Total:03
COURSE REREQUISITE				

The fundamental knowledge and understanding of Physics make it possible for everyone to share in the richness and excitement of comprehending the natural world. Scientific literacy enables students to use scientific principles and processes in making personaldecisions and to participate in discussions of scientific issues that affect society.

LEARNING OUTCOMES

After completion of this course, learners will be able to;

1. understand the Physical concepts in their correct dimensions
2. perceive the Physical Phenomenon with care and concern
3. observe systematically, purposively measure, record and analyze physical data
4. verify the facts, concepts, relations and theories of Physics
5. frame unit plan and lesson plan based on various formats and implement it in classroom teaching
6. perform experiments, demonstrate experiment and apply during classroom teaching
7. ability to assess student's knowledge of physics in a systematic and practical way

COURSE OUTCOMES

The instructor will fulfil the following objectives;

1. To make understand the Physical concepts in their correct dimensions. Integrate knowledge inphysics with other subjects.
2. To let them observe systematically, purposively measure, record, and analyze physical data.
3. To verify the facts, concepts, relations, and theories of Physics.
4. Identify the concepts of physical science that are alternatively conceptualized by teachers and students in general.
5. To explore different ways of creating learning situations considering the learning needs andcontext of the learner and the relevant concept.
6. To facilitate the development of scientific attitudes, Interests, and creativity in learners.
7. To learn how to construct appropriate assessment tools for evaluating learning of physical science.
8. To explore different ways of creating learning situations considering the learning needs andcontext of the learner and the relevant concept.
9. To perform experiments, demonstrate experiments and apply them during classroom teaching.
10. To assess students' knowledge of physics in a systematic and practical way.
11. To understand the process of science and the role of the laboratory in the teaching-learning situation.

COURSE CONTENT

UNIT I	**Aims and Objectives of Teaching Physics**	**10 hours**
	Aims and Objectives of teaching physics- Nurturing curiosity, creativity, and aesthetic sense in science, Values and functions of Science Teaching, Correlation-concept, types, need and importance, correlation of Physics with other subjects, Contributions of scientists- Einstein, Newton, C V Raman, APJ Abdul Kalam, G. Madhava Nair, ECG Sudarshan, Kalpana Chawla, Sunitha Williams, Tessy Thomas	10
UNIT II	**Taxonomy of Educational Objectives**	**12 hours**
	Taxonomy: Bloom's Taxonomy, 1956-Revised Bloom's Taxonomy (Anderson and Krathwohl) Objective-based instruction-and evaluation, Instructional Objectives, how to state Instructional	

	Objectives and specifications. Expected behavioural changes, Cognitive, Affective, and Psychomotor domain learning experience, Process Skills Mc Cormack and Yager Taxonomy of Science Education,1989 - Process skills- Technology Integrated Taxonomy; Techniques for developing Scientific Attitudes, Definitions of Scientific Aptitude teaching Physics. Developing Scientific Capability	
UNIT III	**Planning of Teaching Physics**	**12 hours**
	Teaching skills, micro teaching, Planning for instruction- Stages of Planning instruction- year plan, unit plan, lesson plan- importance and steps in construction; Planning of lessons in constructivist format; Models of Teaching, Developing problem-solving skills, Teaching Physics to students with learning difficulties, use of technology to meet diverse needs of learners, institutional programmes for gifted in Physics.	
UNIT IV	**Holistic, Integrated and Enjoyable Physics Learning**	**10 hours**
	Methods of teaching Physics - Problem-based learning (PBL), Brain-based Learning, Simulations, Analogies, Blended Learning, Problem-Solving method, Project Method, Lecture Method, Demonstration Method, Buzz section, Brain Storming, seminar, and Roleplay Web Conferencing, Webinar, Team Teaching, Heuristic method, concept mapping, Mind Mapping , Integrating Life Skills inScience Teaching, Hands-on learning Physics experiments, toy based Physics experiments ,Arts and Sports Integrated Physics learning	
UNIT V	**Learning Resources**	**10 hours**
	Learning aids and improvised aids important in physics learning; Textbook, Handbook, Sourcebook, Workbook, Reference book, Supplementary reading materials- Qualities, importance; Community Based Teaching and Learning of Physics- Community based resources- Meaning, need and significance; Science library, Science laboratory; Field trips and excursions- Need and importance; Science fairs and exhibition-Significance, organization and evaluation; Science club-Significance, organization and activities; Informal learning contexts: Science Park, museum, historical Governmental and non-governmental movements and organizations for popularising science-Science Talent Search Programme, Science Olympiad, KVPY; E-Resources in Teaching and Learning of Physics.	
UNIT VI	**Assessment of Physics**	**6 hours**
	Achievement test-construction; Diagnostic test-construction, remedial instruction; Assessment of thinking skills- critical and creative thinking- assessment of process skills in Physics; Online assessment-meaning-Practicing of online tools for assessment	

ASSESSMENT		
CIA*-1	Written Examination	
CIA-II	Written Exams/ Quizzes /Assignment /Presentations/ Viva-Voce	
ESE**	Written Examination	

MODE OF TRANSACTION

Lecture-cum-discussions, Brainstorming sessions, Workshop Sessions, Assignments, Presentation by Students

ASSIGNMENT

- Workshop for preparation of lesson plan
- To prepare Science Magazines to contain innovative ideas
- To develop Physical science activities like working model simple Machines, Hand pumps,fans, etc.
- Correlation of physics with other subjects
- Community-based resources available for the teaching of physics
- e-resources in teaching and learning of Physics
- Planning of activities relating Physics education to the environment
- Preparation of an innovative lesson plan
- Research and extension activities for professional growth of physics teacherAssessment Method: Written examination and assignments.

SUGGESTED READINGS

- Anderson, L. W., &Krathwohl, D. R. (Eds.). (2000). A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives. New York: Longman Bloom, Benjamin Samuel. (1956). Taxonomy of Educational Objectives: The Classification ofEducational Goals (Vol.1): Green, Longman.
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- National Council of Educational Research and Training (2013). Pedagogy of physics-11. NewDelhi: Publication Division of NCERT.
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MATRIX OF COURSE OUTCOMES WITH PROGRAMME OUTCOMES

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3		3			3	2	3		
CO2	3	3	3	3	3			3		2

CO3				3		3			2	
CO4	3			3				2	3	3
CO5	2					3		3		2
CO6		3		3						
CO7				2				3	3	3
CO8				3	3					
CO9								3	3	
CO10		3		3		3			3	

3= High level mapping , 2= Medium level mapping , 1=Low level mapping

COURSE CODE: EDU 517

COURSE TITLE: PEDAGOGY OF CHEMISTRY (Core)

Teaching Scheme			**Examination Scheme**	**Credits Allotted**
L	T	P	ESE: 60 Marks Internal Assessment: 40 Marks	Theory:03
2	1	0		
				Total:03

COURSE PREREQUISITE

Student teachers must have basic knowledge of pedagogy, content analysis, various teaching strategies, approaches, teaching-learning aids, use of ICT in teaching, and other learning resources. In addition, they must be familiar with senior secondary school chemistry, terms, facts,principles, and theories. They must also have the basic knowledge of Teaching Objectives taxonomy, psychological aspects of learning and learner, and motivational & assessment strategies.

LEARNING OUTCOMES

After completion of this course, learners will be able to;

1. Understand the concept, meaning, nature and scope of chemistry and the school chemistry syllabus reforms.
2. Do the pedagogical analysis of different topics of the chemistry syllabus at the senior secondary level.
3. Prepare a year, unit, and lesson plan, and use them in the teaching-learning process.
4. Incorporate various appropriate teaching-learning aids to make their teaching effective.
5. Use various assessment and feedback techniques to improve teaching and teach chemistry at the senior secondary level.
6. Improve their planning, implementation & reflection in the teaching of Chemistry.
7. Share the historical development of Chemistry with students
8. Design the curriculum as per the need of society and the nation.

Course Outcomes

The instructor will fulfil the following objectives;

1. To understand the nature and historical development of Chemistry
2. To integrate the knowledge of Chemistry with the other school subject
3. To develop an understanding of the curriculum in Chemistry

4. To train the student teachers in making year plans, unit plans and lesson plans for transacting the chemistry curriculum at the senior secondary level.
5. To comprehend the associated concepts of content analysis, specific and instructional objectives, teaching-learning experiences and assessment.
6. To train the student teachers to construct various assessment tools for assessing cognitive, affective and performance-based learning in chemistry.
7. To make student teachers familiar with measures and practices for interpreting, reporting, and using assessment data to improve learning.

COURSE CONTENT

UNIT I	**Fundamentals of Chemistry Discipline**	**6 Hours**
	Meaning and Nature of Chemistry, Scope and Future Perspectives of Chemistry, Place of Chemistry in the school curriculum (Secondary and Senior Secondary), Correlation of Chemistry with other school subjects. Recent trends in Chemistry Curriculum, CHEM Study, Aims and Objectives of teaching chemistry at school level, Writing learning objectives in behavioural terms;Anderson and Krathwohl's Taxonomy	
UNIT II	**Historical Perspectives of Chemistry**	**8 Hours**
	History of Chemistry: Indian ancient Perspective, Indian Chemists and their contributions; Prafulla Chandra Ray, Har Gobind Khorana, Satyendra Nath Bose, Maharshi Kanada, Nagarjun. Indian women Chemist and their contributions; *Geetha Angara*, Seema Bhatnagar, Sharmila Bhattacharya, Charusita Chakravarty, Asima Chatterjee Prabha Chatterji, Seetha Coleman-Kammula, Rama Govindarajan, Lakshmi Kantam, Paramjit Khurana, Yamuna Krishnan, Lalitha Lenin, Shipra Guha-Mukherjee	
UNIT III	**Planning Instruction**	***15 Hours***
	Meaning of concept, its characteristics, concept formation, assimilation methods, facilitative learning models- constructivist models: Bruner, Piaget, Gagne. Processes of understanding chemical concepts, Anderson and Krathwohl's taxonomy, writing learning objectives, Illustrations on learning objectives for higher secondary stages, Learning objectives in the constructivist perspective, Unit planning, Instructional Planning; Various models of Instructional planning	
UNIT IV	**Teaching Approaches to Chemistry**	**15 Hours**
	Constructivist approach: 5E learning model, Collaborative Learning Approach (CLA), Problem Solving Approach (PSA), Concept Mapping, Experiential learning, Cognitive conflict, Inquiry approach, Analogy strategy, Facilitating learners for self- study, Communication in science Cross-curricular Approach: Art integration in Chemistry pedagogy, Sports integration in Chemistry Pedagogy Curriculum construction steps for Experiential Learning and Twenty-First Century Skills across domains	
UNIT V	**Learning Resources**	***8 Hours***
	Meaning, types, functions, preparation, and utilization of learning resources in chemistry, Online and open sources, text-book, work-book, journals, models, graphics, developing videos and use of	

	mobile technology, chem draw, chem sense, use of social media's technology for posting instructional pictures (using processes), use of the web- quest.	
UNIT VI	**Facilitation for Enhancing Learning in Chemistry**	***8 Hours***
	Organization of chemistry laboratory instrumentation – supply storage and maintenance, chemicals and reagents, procurement, preservation and appropriate use, safety precautions, rules and regulation. Teaching chemistry in different settings – laboratory, filed experiments, mobile chemistry experiments laboratory programme – list of laboratory activities of recommended experiments, project work. National Chemical Laboratory (NCL)-CSIR, Virtual Laboratories	

ASSESSMENT		
CIA*-1	Written examinations	
CIA-II	Written examinations and assignments, teaching sessions, presentations& reflections, viva-voce etc.	
ESE**	Written examinations	

MODE OF TRANSACTION

Lecture-cum demonstration, model lesson planning, Model Teaching session, Role Playing, Simulation, Learning by Expositions, presentations, projects, seminars, focused reflection on pedagogical analysis, collaborative & cooperative strategies, review and brainstorming session

ASSIGNMENT

- Doing pedagogical analysis of the different topics of senior secondary Chemistry.
- Design learning activities, appropriate strategies, selecting/preparing learning resources, assessment techniques and tools, etc.
- Prepare different models of lesson plans on various topics of senior secondary Chemistry.
- Construct unit tests, diagnostic tests and achievement tests in Chemistry.
- Plan and implement remedial instructional strategies on senior secondary chemistry topics.
- Develop learning aids on various chemistry topics and the procedure for using them in natural classroom settings.

SUGGESTED READINGS

1. Agarkar, S.C. (2005) An Introductory Course on School Science Education, Mumbai: HBCSE, TIFR.
2. Chemistry Part I, Textbook for class XII New Delhi: NCERT.
3. Chemistry Part I, Textbook for class XINew Delhi: NCERT.
4. Chemistry Part II, a Textbook for class XI New Delhi: NCERT.
5. Chemistry Part II, Textbook for class XII New Delhi: NCERT.
6. Ediger Marlow and RaoBhaskara. (1996). Science and curriculum, New Delhi, Discovery Publishing House.
7. Gupta, S.K (1992) Teaching of Physical Science, New Delhi: Sterling Publishing House
8. Gupta, V.K. (1995) Teaching and Learning of Science and Technology, Vikas Publishing House Inc.
9. Khirwadkar Anjali (2003). Teaching of Chemistry Modern Method. New Delhi: Sarup& Son's
10. Malhotra, V. (2006) Methods of Teaching Chemistry, New Delhi: Crescent Publishing Corporation.
11. Mani R.S. (1998) Model of Lesson Planning: Some Reflections, Recent Researches in education and Psychology, Vol. 3, No. III- IV, 1998, P.P. 87-90. Mani R.S. (1998) objectives of Teaching Chemistry in Schools C.A.S.E., Department of Education, Vadodara, The M.S. University of Baroda (unpublished mimeographed instructional

material).
12. Mani, R.S. (2001) New Approaches of Teaching Science, Resent Researches in Education Psychology, 6(I-II) 2001, 1-6.
13. Mani, R.S. (2012) Mobile Science and Technology Development of Skills in Science and Technology. Education and Society, (I), 2012

Websites Reference

1. http://www.unit planning.com It costs $400/- for loading the website. It is for sale also for $400/- by a single user at one time.
2. Resources for Teachers –Community Resources for Science http://www.crscience.org/resources for teachers
3. Free classroom lesson plans and unit plans for teachershttp://www.sholastic.com/teachers/lesson plans/free-lesson plans
4. How to write a unit plan 8 steps-wikihowhttp://www.wikihow.com>...>Teacher resources>
5. BBC-Schools-Teachers-Bang goes the theory: Lesson plan 9 http://www.bbc.co.uk>schoolsHome>Teachers>Bang goes the Theory.
6. Video clips from the lesson plan'conservation of mass in chemical reactions' for use in 11-14 science lessons.
7. Unit plan for the periodic table http://www.umanitoba.ca/.../S1-2%20-%20chemistry%20and %20periodic%20…
8. A lesson plan in chemistry phases of matter-slide share http://www.slideshare.net/. /a-lesson-plan-in-chemistry-phases-of-matter-9560... Oct 5,2011
9. High school (Grades 9-12) Chemistry activities, Lesson plans… http://www.sharemy lesson.com/high –school-chemistry-teaching –resources/ (these are provided free onproper request and authentication)
10. Richard, J.A.; Muthlish, N and Bond (2012) can blessed learning enhance teaching skills? University News, 50(11), March 12-18, 2012,1-6 http://www.en.wikipediachemistry
11. Mani, R.S. (2013) planning energy needs and energy technology in education, International Journal of Multidischemistry Sciences and Research, I(I), July-August 2013 206-212

MATRIX OF COURSE OUTCOMES WITH PROGRAMME OUTCOMES

	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO10
CLO1	3									
CLO2	3	3								
CLO3	3	3	3							
CLO4	2	3				3			3	3
CLO5	2					3		3		
CLO6	2					3				
CLO7	2					3		3		
CLO8	2	3				3			3	3

3= High level mapping, 2= Medium level mapping, 1=Low level mapping

COURSE CODE: EDU 518

COURSE TITLE: PEDAGOGY OF ECONOMICS (Core)

Teaching Scheme			Examination Scheme	Credits Allotted
L	T	P	ESE: 60 Marks	Theory:03
2	1	0	Internal Assessment: 40 Marks	
				Total:03

COURSE PREREQUISITE

They should be aware of the school syllabus and have gone through the Economics text books of the state board and NCERT. Should have studied Economics as one subject in graduation.

LEARNING OUTCOMES

Student Teachers will be able to

1. Develop content analysis and frame instructional objectives based on Blooms Taxonomy
2. Correlate economics subject with other subjects
3. use different methods of teaching in school
4. develop and design various teaching aids
5. plan co-curricular activities for the teaching of economics
6. use community resources for effective teaching of economics
7. work for their professional development

Course Outcomes

1. Acquaint the students with the nature of Economics as a discipline and the objectives of teaching Economics at higher secondary stage.
2. Develop understanding about the correlation of Economics with other subjects.
3. Develop an understanding of different types of planning and the importance ofcontent analysis.
4. Develop an understanding of the different methods and approaches forteaching Economics at the higher secondary stage.
5. Make them aware of the various co-curricular activities and community resources for the teaching of Economics
6. Acquaint them with dealing with current issues in economics

COURSE CONTENT

UNIT I	**Economics: Nature and Scope**	**7 hours**
	○ Nature of Economics, Subject matter of Economics: Micro economics & macro-Economics ○ Famous Economists & their contribution: Adam Smith, Keynes, Lionel Charles Robbins, Alfred Marshall, ○ Indian Economists: Amartya Sen, Kautilya ○ Importance of Economics as a discipline at Higher secondary level, ○ Objectives of Teaching Economics. ○ Development of Values through teaching of Economics: Values: cultural, disciplinary, practical, social ○ Development of Competencies & desirable attitudes in students through economics	
UNIT II	**Correlation of Economics with other subjects**	**6 hours**

	○ Co-relation: Meaning, Importance of Co-relation, ○ Types of Co-relation, ○ Co-relation of Economics with other subjects (commerce, history, Geography, mathematics, political science)	
UNIT III	**Planning of Teaching**	**12 hours**
	○ Blooms Taxonomy and writing Instructional objectives. ○ Content Analysis: Need and importance of Content Analysis, Preparation of Content Analysis. ○ Planning of teaching: ○ Need and importance of Planning ○ Unit Plan; Importance, steps of unit plan ○ Lesson plan: need and importance of Lesson plan, Essentials of a good lesson plan ○ Approaches to Lesson Planning: Herbartian approach tolesson planning	
UNIT IV	**Methods of teaching**	**15 hours**
	○ Methods of teaching: ○ Lecture Method: When to use lecture method, how to make lecture effective, Merits and Demerits of using lecture method ○ Project Method: principles of project, steps followed in project method, advantages, disadvantages ○ Discussion: role of teacher, advantages and disadvantages ○ Seminar: Steps, role of teacher, advantages and disadvantages ○ Problem solving: steps, role of teacher, advantages and disadvantages ○ Team Teaching, ○ Innovative ways of teaching economics: making teaching learning process engaging and interesting ○ Dealing with slow learners, advanced learners in classroom	
UNIT V	**Resources for Teaching of Economics**	**10 hours**
	○ Audio Visual Aids : Meaning and Definition, Need and importance of A.V Aids, Types of A.V Aids, Points to be considered while preparing and using A.V Aid, Use of media ○ ICT in teaching of Economics ○ Text Books: Meaning of Text Book, Characteristics of Text Book, Need and Importance of Text Book, Qualities of a Good Text Book, Defects of Existing Text Book, Criteria for evaluation of Text book ○ Community Resources for teaching of economics	
UNIT VI	**Making Learning of Economics Holistic, Integrated, Enjoyable, and Engaging**	**10 hours**
	○ Experiential Learning: using films, dram & art integration ○ Co-Curricular Activities in Teaching of Economics: Importance, Types, Principles of organizing Co-curricular Activities, Need & Importance of Co-curricular Activities, Role of Teacher in organizing Co-curricular Activities ○ Field Trip: Importance, procedure & Role of Teacher ○ Meaning and importance of current affairs	

	○ Role of teacher in dealing with current affairs and controversial topics	
ASSESSMENT		
CIA*-1	Written examination	
CIA-II	Written Exams/ Quizzes /Assignment /Presentations/ Viva-Voce	
ESE**	Written examination	

MODE OF TRANSACTION

 Lecture, Discussion, Workshop, Seminar

ASSIGNMENT

- Group work on the preparation of lesson plans in Economics
- Group work on content Analysis
- Plan and organize the co-curricular activity for economics students
- Prepare a teaching aid and ICT based lessons for teaching economics
- Conducting Seminar in Economics Class.
- Preparing list of different projects which can be given to students

SUGGESTED READINGS

1. Binning, A.C. & Binning, A.H. (--------). *Teaching Social Studies in Secondary Schools.* New York: McGraw Hill & Co.
2. Chakravarty., & Sukhamong. (1987). *Teaching of Economics in India.* Bombay: Himalaya Publisher.
3. Das, R.C. (1984). *Curriculum and Evaluation*. New Delhi: NCERT.
4. Dhand. (1990). *Techniques of Teaching*. New Delhi: Ashish Publishing House.Kanwar,
5. B.S. (1970). *Teaching of Economics*. Ludhiana: Prakash Brothers Educational Publishers.
6. Norman, L. (Ed.). (1975). *Teaching Economics*.(2nd ed.).London Educational books.
7. Rudramambe, B. (2004). *Methods of Teaching Economics*. New Delhi,Discovery Publishers.
8. NCERT. (1974). *Teaching Units in Economics forHigh and Higher Secondary Stage*. New Delhi
9. NCERT. (1975). *The Curriculum for the Ten Year School - A Framework*. New Delhi: NCERT.
10. Yadhav, A. (N.D.) *Teaching of Economics*. New Delhi: Anmol Publications Pvt. Ltd.

MATRIX OF COURSE OUTCOMES WITH PROGRAMME OUTCOMES

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10
CO1	3									
CO2		3								
CO3	3						3			
CO4	1	3	3	3						
CO5										3
CO6									3	

3= High level mapping , 2= Medium level mapping , 1=Low level mapping

SEMESTER V

COURSE CODE: EDU 611 COURSE TITLE: SCHOOL INTERNSHIP-I	
TASK I	**Initiatory Experiences**
	Reflections on one's own School Experiences Creating a 'Big Picture'.
TASK II	**Recognize School as an 'organized' Endeavour**
	Functioning within a 'structure' with defined roles and responsibilities Internal arrangements for coordinated functioning-time table, work allocation, differential responsibilities, planning and coordination procedures External liaison – with parents, community, authorities.
TASK III	**School as an 'Enabling Learning Environment'**
	What 'enables' learning in schools? Nature of school environment; Learner perceptions; teacher perceptions; parental/community perceptions Nature of inter relationships between and among learners-teachers; teachers; teacher- principal; parents-school; office-teachers-learners Nature of 'impact' generated in school.
TASK IV	**Classroom as a Learning Site**
	Kinds, modalities, learning resources used, student reactions and any relevant related points.
TASK V	**Design Learning Sequences in the school subject**
	Design Learning Sequences in the school subject *with* all the details required; draw upon from the other earlier courses of study.

Note: After the completion of four weeks internship-I programme, students-teachers will be required to develop a hand - written detailed report for all the five tasks and share the same in the form of presentation. Student-teachers should prepare a detailed report in a good format foreach task of internship-I, not less than ten pages each.

COURSE CODE: EDU 612 **COURSE TITLE: SCHOOL INTERNSHIP-II**	
TASK I	**Planning and Facilitating Teaching-Learning**
	1. Prepare Time-Table 2. Daily Attendance Record 3. Unit/ Lesson planning 4. School Teachers/ Peer Lesson observation 5. Classroom teaching for 14 weeks at seniors secondary class 6. Prepare Unit Plans as per supervisor suggestion 7. Prepare Instructional Planning 8. Developing and Using Teaching Learning Resources 9. ICT integration during Teaching
TASK II	Assessment and Remediation
	1. Preparation of an Achievement test, administration and prepare a report. 2. Preparation of diagnostic tests and identifying learning difficulties. 3. Planning and executing remediation 4. Assessing effectiveness of remediation
TASK III	**Understanding Learner**
	1. Enrichment programme for talented children, in-group learning set up and on self-learning models. 2. Identify diverse learners in your class during teaching. 3. Conduct Sociometry in any 4. Collection of information about a student (Case Study)
TASK III	**Understanding School Context**
	1. Collection of academic year students' records related with different social and differentiable categories wise; school and learners' performances & schools' participation/organization records in various contexts like sports, cultural, music and social sector etc. 2. Analysis of School and Learners Performance (One class) on the basis of school achievements
TASK V	**Participation in School Activities**
	1. Conduct and Participate in Morning Assembly 2. Organization of all types of co-curricular activities, e.g. sports and games, debate, song, art, music, painting
TASK VI	**Stake Holders Interactions**
	1. Interaction with School Teachers and Authorities 2. Interaction with SDMC/SMC Members 3. Interaction with Parents

Note: After completion of Internship-II, each of the student teacher have to prepare a brief report related with all activities conducted during internship.

Post-internship Activities

- Follow-up activities (remedial and enrichment activities) to be taken up by the Institute
- Finalization of records and reports related to curricular and co-curricular activities

COURSE CODE: EDU 613

COURSE TITLE: ACTION RESEARCH IN SCHOOLS

Learning Out Comes

After completing this practical the learners would be able to;

1. Understand the concept of Action Research.
2. Acquaint with the steps of conducting Action Research.
3. Select the title of the action research to be conducted by them during internship.
4. Prepare their initial plan (synopsis)
5. Implement the intervention required for the action research.
6. Analyze the results and interpretate to solve the problem.

Step for Action Research

1.The interns would enroll themselves in Any online course (Preferred Online course on Diksha Portal offered by NCERT).

2. The Interns would complete this course within one months of joining school for internship and gain certificate of Completion.

3. After completing online course, the interns will select their title of action research to be conducted by them during internship.

4. The intern will prepare their initial plan (synopsis) and present to supervisor for further guidance.

5. The intern have to present a separate presentation on action research in mid term assessment.

6. The intern would conduct intervention for the solution or problem selected.

7. The intern will prepare a separate action research report.

6. The interns would give presentation and produce report along with the certificate of completion gained from online course in end term assessment.

COURSE CODE: EDU 614

COURSE TITLE: Community Based Participatory Reseach

LEARNING OUTCOMES

After completing the community based participatory research, learners will be able to;

1. **Present clear picture of the community.**
2. **State about their problem and struggle at various plate form.**
3. **Generate empathy towards community struggles for basic things.**
4. **Try to find out solution for the problems faced by them.**
5. **Write a paper on the research conducted.**

COURSE OUTCOMES

1. **Understand the basic and fundamental structure of the nearby community of the school.**
2. **Prepare the map after doing transact walk.**
3. **Identify the problems faced by the community.**
4. **Identify their knowledge and talent they have and survival strategies.**
5. **Explore the transit solution community has find out for the problem they faced.**
6. **Visit the Institutions like hospital, school and panchayat etc.(available in particular area).**
7. **Survey related the facilities these institutions have and services provided to the community.**
8. **Identify the points of lagging behind and suggestions how they can overcome.**

Steps for Community based Participatory Research

1. The intern will discuss with the supervisor and if possible, will do an online course (as supervisor will suggest.)

2. The intern will to conduct a transact walk in the near by community and prepare a map of the transact walk.
3. The intern will identify the problems faced by the community, their knowledge and talent they have and survival strategies,
4. The intern will explore the transit solution community has find out for the problem faced by them.
5. The interns will visit the Institutions like hospital, school and panchayat etc.(available in particular area).
6. The intern will survey related the facilities these institutions have and services provided to the community.
7. Identify the points of lagging behind and suggestions how they can overcome.
8. The intern will try to find out solution if possible and would suggest solution.
9. The intern would prepare a complete report and present in End term Assessment.
10. The intern will also present their progress about community participatory research during mid-term assessment.