GHG KHALSA COLLEGE OF EDUCATION, GURUSAR SADHAR, LUDHIANA

UNIT PLANNING

(Session 2023-24)

M.Ed (Semester – I) **(**PAPER - I) (COURSE CODE: C01-PIE-I)

COURSE TITLE: Perspectives in Education - I

Total Marks = 100 Internal Assesment=20

External Theory= 70 Sessional work=10

TOPICS TO BE COVERED DURING THE SEMESTER

Month	**Topic**	**Tentative lectures**	**Mode/ Resources**
August	Unit I (a) Concept of Education	5	Lecture / Discussion/ Notes in the form of pdfs / docs shared with students through LMS/ Video related with the topic shared with students through LMS
August	Unit I (a) Principles of Education	3	Lecture & Discussion/ Notes in the form of pdf shared with students through LMS
August	Unit I (a) Assumptions of Education	3	Lecture & Discussion
September	Unit-II b) Axiological issues in education	3	Lecture through Powerpoint Presentations
September	Unit I b) Prioritizing the aims of education in the context of national values enshrined in the constitution of India	5	Lecture & discussion

September	Unit-II a) Epistemology and Education: Knowledge; methods of acquiring valid knowledge with special reference to logical analysis, positive relativism and constructivism.	9	Lecture through PPT/ Notes in the form of Powerpoint Presentations shared with students through LMS
September	Unit-III a) Sociology of Education: Concept and Theoretical Perspectives (Functionalist, Conflict & Interactionist).	7	Lecture & discussion/ Notes in the form of pdf /PPT shared with students through LMS
October	Unit-III b) Secondary School Education: Contemporary Challenge: multiple school contexts.	4	Lecture & discussion/ Notes in the form of doc shared with students through LMS
October	Unit-III c) Social Change: Concept and determinants of Social Change	6	Lecture & discussion/ Notes in the form of pdfs / docs shared with students through LMS
October	Unit-III (c) Modernization	4	Lecture & discussion
October	Unit I (a) Critical analysis of education as a discipline or area of study; connecting knowledge across disciplinary boundary.	3	Discussion in the class and Assignment

November	Unit-IV a) Education as related to social equity and equality of educational opportunities with special reference to socio-economically disadvantaged sections of society based on caste, gender, locale, income disparity and different disabilities.	6	Lecture / Discussion/ Notes in the form of pdfs / docs shared with students through LMS
November	Unit-IV b) Social Stratification; Concepts, Factors affecting; Education in relation to Social stratification with special reference to Indian Society.	7	Lecture / Discussion/ Notes in the form of pdfs / docs shared with students through LMS
December	Visit to a rural, urban (slum), alternative, innovative, secondary schools; observation of activities and preparation of a reflective diary.	4	Sessional Work and Discussion
December	Unit-IV b) Social Mobility; Concepts, Factors affecting; Education in relation to Social Mobility with special reference to Indian Society.	7	Lecture / Discussion/ Notes in the form of pdfs / docs shared with students through LMS

Class M.Ed : UNIT PLANNING
(session 2023-24)
Subject: History of Education-I (M.Ed C04-HOE-I)

Month	**Unit**	**Topic**	**Method**	**Time Allotted**	**Resources**
August	Unit-I Education in ancient India	a) Vedic and Buddhist period	Lecture cum discussion e-learning	4 lectures 4 lectures	History of Education by BC Rai Self developed e-module Teacher notes
August	Unit-I Education in ancient India	b) Jainism and Islamic tradition	Lecture cum discussion e-learning	3 lectures 3lectures	History of Education by BC Rai Self developed e-module Teacher notes
September	Unit-II Education in British period	a) Study and review the impact of the following on Indian Education System: Macaulay's Minutes and its Effect, Woods Dispatch, The Education Commission (1882), The University Commission (1902), The Sargent Report(1944) b) Efforts by Indian reformers for education during British period such as Raja Ram Mohan Roy, Gopal Krishan Gokhale,Maulana Azad and Mahatama Gandhi	Lecture cum discussion Powerpoint Presentation	12 lectures 10 lectures	History of Education by BC Rai Resources from the web: pdf and Ppts Teacher notes History of Education by BC Rai Resources from the web: pdf and Ppts Teacher notes

September	Sessional Work	Critique of POA/NCF-2005/RTE/Draft of NPE 2019 NPE 2020	Discussion and Seminar	2 lectures	Documents published by Govt of India available on web
October	Unit-III A critical review of: Education in the post-Independence period	a) The University Education Commission (1948) b) Secondary Education Commission (1952) c) Indian Education Commission (Kothari Commission) (1964-66)	Lecture cum discussion Power point Presentation	10 lectures	Documents published by Govt of India available on web Contemporary Indian Education by J.S. Walia Teacher notes
October	Unit-III A critical review of: Education in the post-Independence period	d) National Policy on Education (1986 & 1992) e) Universalization of elementary education RTE Act (2009)	Lecture cum discussion Powerpoint Presentation	6 lectures	Documents published by Govt of India available on web Contemporary Indian Education by J.S. Walia Teacher notes
November	Unit-IV Trends and issues in Education	a) Dynamics of colonial and post colonial encounters and their influence on Indian education system. Education in India in the 21st century. b) Millennium Development Goal given by UNESCO	Lecture cum discussion Power point Presentation	12 lectures	Documents published by Govt of India available on web Contemporary Indian Education by J.S. Walia Teacher notes

		Highlighting Education c) The status and challenges of existing structure of secondary school education d) Impact of LPG policies on Indian education			
December	Sessional work Revision	Book review of Education in India(Altekar,1944)/The Education Commission and After(Naik,1997) Whole syllabus	Discussion and Seminar Library visit Discussions, snap test	2 lectures 8 lectures	Education in India(Altekar,1944)/The Education Commission and After(Naik,1997)
December	FINAL PANJAB UNIVERSITY EXAMINATIONS				

COURSE CODE: C02-LLP-I

COURSE TITLE: LEARNER AND LEARNING PROCESS

Total Marks : 100 External: 70 Internal : 30

Month	**Topic**	**Method**	**Time Allotted**	**Resources**
August	Growth and Development: Concept, Difference, Principles	Lecture cum discussion	4 lectures	Learner and learning process by D. JasbirKaur. (2017)
	Cognitive Process: (Sensation, Attention, Perception, Concept formation) Piaget's Theory of Cognitive Development	Lecture cum discussion Power point Presentation	8 Lectures 4 lectures	General Psychology by Morgon and King (1993) Self- Developed e – content (Piaget)
	Development during Adolescence	Sessional Assignment		
September	Essentials of Good learning Environment	Classroom Seminar	4 lecture	Learner and learning process by D. JasbirKaur (2017)
	Coping with Diversity	Group discussion	2 lectures	Exceptional Children by Dr. S.K. Mangal

	Demands of Inclusive environment	Power point Presentation	4 lectures	Self developed E content
	Sessional Work	Laboratory Visit		
October	Multiple Ways of organizing learning	Lecture cum Discussion	4 Lectures	Educational Technology by R.A Sharma

	Cognitive and Contextual Theories (Bandura and Vygotsky)	Lecture cum discussion Power point Presentation	4 lectures	Self Developed E content (Vygotsky)
	Creativity	Classroom Seminar	4 lectures	
November & December	Strategies for Developing logical Thinking	Lecture cum discussion, Brainstorming	4 lectures	Advanced Educational Psychology by S.S Chauhan (2003)
	Social learning	Lecture cum Discussion	4 lecture	
	Sessional work	Lab Visit	8 lectures	Manuals and Questionnaires
	Addressing Classroom Aggression	Lecture cum Discussion	4lectures	Educational Psychology by Dr. J.S. Walia

Educational Research and Statistics-I (C03-ERS-I)

Month	Topic	Resources	Methodology	Lectures/ Credits
August	Unit 1 : Meaning and steps of scientific method. Educational Research: Meaning, Need and Importance, Classification: Fundamental, Applied and Action Research. Unit 3 a)Meaning and importance of statistics b) Measures of Central tendency	Best, J.W. & Kahn J.V. (1995). Research Education. New Delhi: Prentice Hall of India Pvt. Gill, R.S. (2021) Methodology of Educational Research & Statistics. Ludhiana: Kalyani Publishers Ltd. Kumar, R. (2005): Research Methodology- A step by step guide for beginners. New Delhi: Pearson Education	Classroom Lecture, Discussions, Notes in the form of pdfs / docs shared with students through LMS	8
September	Unit 1: Qualitative Research: Meaning, Characteristics, Merits and limitations. Selection of research problem, areas of research, Unit 3	Kaul Lokesh (1984): Methodology of Educational Research. New Delhi: Vikas Publishing House Pvt. Ltd Garrett, H.E. (1986): Statistics in Psychology and	Discussions, Notes in the form of print outs as well as pdfs / docs shared with students through LMS	7

	Graphical representation of data: Histogram, Frequency Polygon, Ogive, pie diagram and box plot	Education. Bombay: Vakils Feiffer's and Simons Pvt. Ltd.		
October	Unit 1 Identification and statement of research problem, survey of related literature and research proposal Unit 3: Measures of Variability: Range, Average Deviation, Quartile deviation and standard deviation. Assignment : Calculate Mean, Median Mode for 5 Problem discussed in class Assignment: Prepare a Research Proposal	Kaul Lokesh (1984): Methodology of Educational Research. New Delhi: Vikas Publishing House Pvt. Ltd	Searching from Library Discussions, Notes / docs shared with students through LMS	7
November	Unit 2: Hypothesis: definition, importance, Types and formulation of hypothesis. Testing of hypothesis, Type-I and Type –II Errors Unit 4.	Singh Rachhpal (2020) Methodology of Educational research & Statistics Book by Sahu, B. K on Statistics in Education for Beginners.	Classroom Discussions, Problem solving Method	6

	Measures of relationship: Rank Order Correlation, Product Moment method of Correlation and significance of correlation.			
December	Unit 2: Sampling: meaning and steps. Methods of sampling: Non-Probability and Probability, types of Non-Probability and Probability sampling, Unit 4 : Normal Probability Curve: Concept, Characteristics and Application	Best, J.W. & Kahn J.V. (1995). Research Education. New Delhi: Prentice Hall of India Pvt. Ltd. Kumar, R. (2005): Research Methodology- A step by step guide for beginners. New Delhi: Pearson Education	Teaching with the help of Live Examples, Discussions, shared with students through LMS; you tube links	7
December	Unit 2 Sampling Error Unit 4 Practice of Questions (Relationship and NPC)	Kaul Lokesh (1984): Methodology of Educational Research. New Delhi: Vikas Publishing House Pvt. Ltd	Classroom Lecture, Discussions, Notes in the form of pdfs / docs shared with students through LMS	7

COURSE CODE: C05-TED-I
COURSE TITLE: Teacher Education-I
Credits= 4 Total Marks= 100 External= 70
Theory Internal= (Assessment=20; Sessional work=10)
***One lecture= 40 minutes**

Month	**Unit**	**Topic**	**PA**	**Mode *of Teaching***	**Source**
August	**I(a)**	Importance of Teacher Education, Teacher Educators, their roles and responsibilities.	2	Discussion followed by PPT	Own Prepared Notes (PPT/PDF)
	I(a)	Scope of Teacher Education-Preparing teachers for Secondary and Higher Education.	3	Handouts followed by discussion	Own Prepared Notes(PPT/PDF)
	II(a)	Pre-service training: Objectives and Scope.	3	Lecture & discussion	Own Prepared Notes(PPT/PDF)
	I(a)	New courses in Teacher Education.	2	Handouts followed by discussion	Own Prepared Notes(PPT/PDF)
	II(a)	Pre-service training: Objectives and Scope.	3	Lecture & discussion	Own Prepared Notes(PPT/PDF)
Sept	**I(b)**	Agencies regulation Teacher Education in India (NCERT: roles and responsibilities, Policy documents).	3	PDF followed by discussion	Download document form NCERT website
	I(b)	Agencies regulation Teacher Education in India (NCTE: roles and responsibilities, Policy documents).	2	PDF followed by discussion	Download document form NCTE website
	I(c)	Tracing the changes in Teacher Education in light of National Curriculum Framework, 2005	3	Handouts followed by discussion	Download document from website
	I(c)	Tracing the changes in the National Curriculum Framework for Teacher Education, 2009.	3	Handouts followed by discussion	Download document form website
	II(a)	Components of Pre-service secondary teacher education: Core and Specialization courses, practicum, internship, co-curricular activities, working with the	4	Lecture & discussion followed by B.Ed Syllabus	B.Ed Syllabus for PU Website

		community and work experience.			
Oct	**II(c)**	Curriculum transaction in Pre-Service secondary teacher education: Teaching methods, lecture-cum-discussion, Group discussion, Brainstorming, use of ICT, internship program.	4	Assignment	
	III(a)	Continuing Professional Development of In-Service Teachers-Concept and importance of Professional Development.	4	Lecture through PPT	e-content Development
	III (b)	Strategies of Professional Development: workshops, seminars	2	Lecture through PPT	My Blog
	III (b)	Strategies of Professional Development: symposium, panel discussions	2	Lecture through PPT	My Blog
	III (b)	Strategies of Professional Development: conferences, self-study	2	Lecture through PPT	My Blog
Nov	**III (b)**	Strategies of Professional Development: extension lectures, refresher courses, research colloquium.	3	Handouts followed by discussion	Own Prepared Notes(PPT/PDF)
	III (c)	Agencies for in-service education (DIET)	2	Discussion followed by PPT	Download document form website
	III (c)	Agencies for in-service education (NCTE)	2	Handouts followed by discussion	Download document form website
	III (c)	Agencies for in-service education (NCERT)	2	Handout followed by Discussion	Download document form website
Dec	**III (c)**	Agencies for in-service education (SCERT)	2	Discussion followed by PPT	Download document form website
	III (c)	Agencies for in-service education (Academic Staff College)	2	Lecture & discussion	Download document form website
	III (c)	Agencies for in-service education (Institutional Programmes (HRD Department) Extension	3	Discussion followed by PPT	Download document form website

		Department).			
	IV(a)	Concept of teaching as a profession,	2	Discussion followed by PPT	Own Prepared Notes(PPT/PDF)
	IV(a)	Professional ethics of teachers	1	Handout followed by Discussion	Own Prepared Notes(PPT/PDF)
	IV(a)	Teacher accountability and performance appraisal of teachers.	2	Handout followed by Discussion	Own Prepared Notes(PPT/PDF)
	III(b)	Selection, appointment of teachers and induction programmes for teachers	4	Discussion by sharing Examples	Own Prepared Notes(PPT/PDF)
	IV(c)	Assessment and Evaluation in teacher education programme.	4	Lecture through PPT	Own Prepared Notes(PPT/PDF)
		Critical Analysis of NCFTE, 2009 and 2014.		Prepare Report	
Final Examination					

M.Ed (Sem II)

COURSE CODE: C07-PED-II

COURSE TITLE: PROCESS OF EDUCATION-II

Total Marks : 100 External: 70 Internal : 30

Month	Topic	Tentative lectures	Mode/ Resources
January& February	Unit I Vision derived from synthesis of different schools of philosophy: Indian (Sankhya Philosophy)	5	Lecture / Discussion/ Notes in the form of pdfs / docs shared with students through LMS.
	Unit I Vision derived from synthesis of different schools of philosophy: Indian (Yoga Philosophy)	4	Lecture & discussion/ Notes in the form of pdf shared with students through LMS
	Unit I Vision derived from synthesis of different schools of philosophy: Indian (Vedanta Philosophy)	4	Lecture & discussion/ Notes in the form of pdf shared with students through LMS
	Unit I Vision derived from synthesis of different	5	Lecture

	schools of philosophy: Western (Realism Philosophy)		& discussion/ Notes in the form of pdf shared with students
	Unit I Vision derived from synthesis of different schools of philosophy: Western (Existentialism Philosophy)	5	Lecture & discussion/ Notes in the form of pdf shared with students
March	Unit-II Critical analysis of educational thoughts of great thinkers: Dr. Radhakrishnan, Swami Vivekananda, J. Krishnamurthy, John Dewey, Paulo Freire, Evan Illich	10	Lecture & discussion/ Notes in the form of pdf shared with students
	Unit-III(a) Connections and interactions in the process of education-Nature of connections and interaction involved: Between the child and the environment; in linking the school practices with life outside the school; in relating subject knowledge with real life experiences of the child; between the knowledge and practices; between the content and the pedagogy; Between ICT and teaching -learning process	4	Discussion in the class and Assignment

	Unit-III(b) Relationship of Education and Politics with special reference to Democracy and Secularism in Indian context.	4	Lecture & discussion/ Notes in the form of doc shared with students through LMS
April	Unit-IV (a) Process of socialization and acculturation of the child-critical appraisal of the role of school, parent, peer-group and the community.	8	Lecture & discussion/ Notes in the form of pdfs / docs shared with students through LMS
May	Unit IV (b) Economy and Education- Impact of LPG (Liberalisation, Privatization and Globalisation) on education.	6	Lecture & discussion
	Sessional Work : Reading of original texts of Rabindernath Tagore /M.K Gandhi/SriAurobindo/John Dewey /J.Krishnamurthy and writing of review of a book written by any of the above authors or any contemporary Educational thinker.		Sessional work

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COURSE CODE : C08 PIS-II

COURSE TITLE: PSYCHOLOGY FOR INDIVIDUAL AND SOCIAL DEVELOPMENT

Total Marks : 100 External: 70 Internal : 30

Month	Topic	Time Alloted	Method	Resources
January	Unit II (a)Personality: Concept, Dimensions	2lectures	Lecture cum discussion	Advanced Educational Psychology by S.K. Mangal
	Theories	6 lecture		
	b)Assessment of Personality	6 lectures		
	Sessional Work		Laboratory Visit	
February	Unit I (a)Learning: meaning and factors,	6 lectures	Lecture cum discussion	Psychology for Individual and Social Development by Dr. JasbirKaur
	Gagne's Hierarchy of Learning, Latent Learning	5 lectures	Lecture cum discussion	
	(b)Transfer of learning		Sessional Assisgnment	
	Sessional Work		Laboratory Visit	Manual and Questionnires
March	Unit II (c)Motivation: Concept, factors	2lectures	Lecture cum discussion	Advanced Educational Psychology by S. S. Chauhan
	Mental Health	4 lectures	Group Discussion and Peer tutoring	

April	Unit II (c) Adjustment, Conflict and Defense Mechanism	6 lectures	Lecture cum Discussion	
	Unit III (a)Evolution of Intelligence	3 lectures		Advanced Educational Psychology by S.K. Mangal
	(b)Theories of Intelligence	4 lectures	Powerpoint presentation	Self Prepared E content
	(c)Emotional Intelligence	3 lectures	Lecture cum Discussion	Advanced Educational Psychology by S.K. Mangal
May	Unit IV (a)Concept of Children with Diverse needs	2 lectures	Lecture cum Discussion	Psychology for Individual and Social Development by Dr. JasbirKaur
	(b)Classification and Role of Teachers	1 lecture	Group Discussion	
	Unit III (c) Spiritual Intelligence	3 lectures	Lecture cum Discussion	
	Unit IV (b) Concept, Characteristics and Identification of Learning Disabled Children	8 lectures	You tube video presentations	Exceptional Children by S.K. Mangal
	(c) Inclusive Education: Concept, Process and Barriers	8 Lectures		Self prepared E content
	House Test			

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Educational Research and Statistics-II (C9-ERS-II)

Month	Topic	Resources	Methodology	Lectures/ Credits
January	Unit 1 : a) Tools: Characteristics of a good tool, Meaning and methods of reliability and validity. Unit 1: b) Psychological tests, questionnaire, rating scales, attitude scale (Thurston and Likert's scale) Unit 3 a) Significance of Statistics (Mean Only), Significance of difference between means: Large and small, Independent and correlated .	Mangal, S.K. Methodology of Educational research & Statistics. Kumar, R. (2005): Research Methodology- A step by step guide for beginners. New Delhi: Pearson Education	Classroom Lecture, Discussions, Notes in the form of pdfs / docs shared with students through LMS	8
February	Unit 1 c) Technique: observation and interview Unit 3:. b) ANOVA(one way) Assignment:	Kaul Lokesh (1984): Methodology of Educational Research. New Delhi: Vikas Publishing House Pvt. Ltd Garrett, H.E. (1986): Statistics in Psychology and Education. Bombay: Vakils Feiffer's and Simons Pvt. Ltd.	Discussions, Notes in the form of print outs as well as pdfs / docs shared with students through LMS	7

March	Unit 2: a) Historical Method: Meaning, Value, Difficulties, Types and steps. b) Descriptive Method: Meaning, Value and types.	Mangal, S.K. Methodology of Educational research & Statistics Kaul Lokesh (1984): Methodology of Educational Research. New Delhi: Vikas Publishing House Pvt. Ltd	Searching from Library Discussions, Notes / docs shared with students through LMS	7
March	Unit 2: c) Experimental Method: Meaning and purpose, Variables: Independent, Dependent, Treatment, control, Intervening, Extraneous. Essential characteristics of experiment method, Steps. Unit 4 : a) Phenomenology, case study, Ethnography	Singh Rachhpal (2020) Methodology of Educational research & Statistics Book by Sahu, B. K on Statistics in Education for Beginners.	Classroom Discussions, Problem solving Method	6

April May	Unit 2 d) Experimental Designs: Meaning, criteria for selecting an experimental design, Pre Experimental, True Experimental, Quasi Experimental, Factorial designs. (2x2) e) Writing Research Report Unit 4 Qualitative Research b) Reliability and validity of qualitative research, analysis of Qualitative data	Best, J.W. & Kahn J.V. (1995). Research Education. New Delhi: Prentice Hall of India Pvt. Ltd. Lambert, M. (2012): A beginners guide to doing your education research project. London: Sage Publications	Teaching with the help of Live Examples, Discussions, shared with students through LMS; you tube links	7

COURSE CODE: E03-PLE-II
COURSE TITLE: PEDAGOGY OF LANGUAGE EDUCATION
Max Marks: 100 Marks,
External Theory: 70 marks, Internal: 30 Marks

Month, Year	Unit	Topic	Method	Time Allotted	Resources
January	I	Language acquisition and communication–factors affecting language learning and language acquisitions and communication	Lecture cum discussion through Zoom platform	21 lectures	Book written by Dr. ManjuSood and Dr. Rekha
		Linguistic, psychological and social processes involved in learning of languages	Lecture cum discussion through Zoom platform	7 lectures	Book written by Dr. ManjuSood and Dr. Rekha
		Models of Language Acquisition: Chomsky-Language Acquisition Device, Piaget-Cognitive Constructivism and Language; recent theorization: intentionality; application of these theories to development of methodologies of teaching-learning of language.	Lecture cum discussion through Zoom platform	7 lectures	Book written by Dr. ManjuSood and Dr. Rekha

February	II	Discourse Analysis: Theories of discourse analysis including speech acts, conversational maxims, conversational analysis, ethno-methodology, text analysis, and critical discourse analysis.	Lecture cum discussion through Zoom platform	6lectures	Book written by Dr. ManjuSood and Dr. Rekha
		Meta- linguistic awareness with a focus on listening, speaking, reading, comprehension at writing.	Lecture cum discussion through Zoom platform	7 lectures	Book written by Dr. ManjuSood and Dr. Rekha
March		Need and techniques (viz. differential assignments, classroom tasks, etc.) for personalized system of instruction	Lecture cum discussion through Zoom platform	7 lectures	Book written by Dr. ManjuSood and Dr. Rekha
May	III	Language learning at secondary and higher secondary stage Pedagogy of First language, Second language, Third language	Lecture cum discussion through Zoom platform	12 lectures	Book written by Dr. ManjuSood and Dr. Rekha

		Development of language curriculum and the syllabus: dimensions, factors that influence the curriculum, selection and sequencing of content, contexts, transaction and evaluation techniques	Lecture cum discussion through Zoom platform	6 lectures	Book written by Dr. ManjuSood and Dr. Rekha
April	IV	Cross linguistic influence in learning another language;	Lecture cum discussion through Zoom platform	1 lecture	Book written by Dr. ManjuSood and Dr. Rekha
		ecology of bilingual memory	Lecture cum discussion through Zoom platform	1 lecture	Book written by Dr. ManjuSood and Dr. Rekha
		Multilingual classroom	Lecture cum discussion through Zoom platform	1 lecture	Book written by Dr. ManjuSood and Dr. Rekha
		Medium of instruction– recommendation of NPE1986/1992	Lecture cum discussion through Zoom platform	3 lecture	Book written by Dr. ManjuSood and Dr. Rekha

May		Medium of instruction– recommendation of NCF-2005	Lecture cum discussion through Zoom platform	2 lecture	Book written by Dr. ManjuSood and Dr. Rekha
		Preservation of heritage language	Lecture cum discussion through Zoom platform	1 lecture	Book written by Dr. ManjuSood and Dr. Rekha
		Home language & school language	Lecture cum discussion through Zoom platform	2 lecture	Book written by Dr. ManjuSood and Dr. Rekha
		problem of tribal dialects	Lecture cum discussion through Zoom platform	1 lecture	Book written by Dr. ManjuSood and Dr. Rekha
		Problems related to evaluation of language learning	Lecture cum discussion through Zoom platform	1 lecture	Book written by Dr. ManjuSood and Dr. Rekha

P-1.1 & P-1.2

TEACHING OF MATHEMATICS EDUCATION

Max Marks: 100 Marks,

External Theory: 70 marks, Internal Practical: 30 Marks

**One lecture-40 minutes*

Month	Unit	Topic	PA	Mode *of Teaching*	Resource
January	**I(a)**	Meaning, Nature and scope of mathematics. Distinction between mathematics and Science;	2	Discussion followed by PPT	Own Prepared Notes(PDF/PPT) and Two Years Pedagogy of Mathematics (NCERT)
	I(a)	Structure of Mathematics: Pure and Applied Mathematics, Axiom Postulates, Importance, Application and Selection of Examples.	3	Lecture cum Discussion as per B.Ed Syllabus Content	Own Prepared Notes(PDF/PPT)
	I(a)	Proof/Solution of mathematics Problems-Direct proof, indirect proof, Proof by contradiction,	2	Lecture cum Discussion	Two Years Pedagogy of Mathematics (NCERT)
	I(b)	Recreational and Aesthetic aspect of mathematics: Games, Puzzles, Riddles, Symmetry etc and their role in learning mathematics.	4	Lecture cum Discussion on shared resources	Dr. SK Mangal
February	**I(b)**	Mathematics Club: Need and Importance, Goals, Organization and Activities.	2	Lecture cum Discussion on shared resources	Dr. SC Gakhar
	I(b)	Mathematics Laboratory: Designing and Layout, Need and Importance, Materials and Procedure to set up.	1	Lecture cum Discussion on shared resources	Dr. SC Gakhar as well as Own Prepared Notes(PDF/PPT)
	I(c)	Development of Mathematics with some famous anecdotes, Pythagoras, Aryabhatt, Ramanujan.	4	Discussion method followed by Group Activity	Discussion Method followed by Student Activity to prepare sample Lesson

	I(c)	Teaching Mathematics Modeling.	2	Group Discussion	NCERT Books IX & X
	I(c)	Pedagogical Analysis of Mathematics	2	Activity Method	Dr. SK Mangal
	II(a)	Curriculum: Meaning, Principles of curriculum, Construction and Organisation.	2	Discussion followed by PPT	Dr. SC Gakhar Dr. SK Mangal
	II(b)	Curriculum Evaluation and Reform in School Mathematics Curriculum: Rationale, Objective, Principles, Learning Experiences and Materials in mathematics, Recent Curriculum reforms at National and State Levels (NCF 2009).	4	Discussion followed by PPT as well as activity to layout important reforms as per NCF 2009	Self Prepared Notes(PDF/PPT)
March	**II (c)**	Developing Remedial Learning experiences and teaching material to overcome special problems of students. Developing enriched programmes and materials for teaching gifted and backward students in mathematics.	2	Prepare a presentation or an assignment on the topic	Reference notes on LMS and Dr. SK Mangal
	III(a)	Approaches of Mathematics Teaching-Learning: Constructivist Approach, Competency Based Approach.	4	Lecture cum Discussion Method	Self Prepared notes and shared through LMS
	III(b)	Methods of Mathematics Teaching- Learning: Inductive and Deductive Method, Analytic Synthetic method, Computer Based Instructions and Computer Aided Learning.	5	Brainstorming session	Dr. SC Gakhar Dr. SK Mangal Dr. VK Sahu
	III (c)	Techniques of Mathematics Teaching-	5	Lecture cum discussion	Dr. SC Gakhar as well as Self

		Learning: Problem-Solving: Stages of Problem Solving Techniques to improve Problem- Solving Skills (Polya Method), Co-operative Learning (Jigsaw Method, Think Pair-Share).		followed by Handouts	Prepared notes and shared through LMS
April	**IV(a)**	Evaluation in Teaching Learning Process: Formative, Summative and Diagnostic.	2	Brainstorming session	Dr. SC Gakhar Dr. VK Sahu
	IV(a)	Identification and analysis of mistakes in mathematics, prevention and suggested remedial measures.	2	Activity Method	Self-Prepared notes shared on LMS
May	**IV(a)**	Enrichment Programmes in mathematics learning: National mathematics Talent Search, Mathematics Olympiad.	2	Lecture cum Discussion	Shared handout on LMS
	IV(b)	Types of test items in mathematics: Meaning, merits, limitations and Construction of long answer type, short answer type, very short answer type and objective type	3	Seminar Method	Own Prepared Notes(PDF/PPT) shared through LMS
	IV(b)	Construction and standardization of an achievement test in mathematics.	2	Discussion method followed Group activity	Dr. SK Mangal Self-Prepared notes
	III(b)	Action Research in Mathematics	2	Discussion followed by Handouts	Own Prepared Notes(PDF/PPT) and shared on LMS
		Any one of the following: 1. Development of lesson plan 2. Development of achievement test			

UNIT PLANNING

SEMESTER-II
COURSE CODE: E01-PSE-II
COURSE TITLE: Pedagogy of Science Education-II
Credits= 4

Session Dates: Janaury 2024-May 2024

Total Marks = 100 **External = 70** **Internal= 30**

1 Lecture=45 mins

Unit-I

Nature of Science

January , 2024

Summary of Unit:

- **Evolution of science as a discipline, science as a dynamic and expanding body of knowledge; development of scientific knowledge;**
- **Science and technology, correlation between science and technology & other branches.**
- **Common misconceptions of pupils about the nature of science; characteristics of different disciplines of science and their interrelationship.**

(6 lectures)

After completing the course, the prospective teacher educators will be able to:
•explain the nature of science as a dynamic, expanding body of knowledge and as a social endeavor;
• explain the difference and complementarity between Science and Technology;

Resources:

- Kaur. R. (2007).Teaching of Science. Patiala: Twenty first century publications.
- Kohli V.K. (2003). How to teach science. Ambala: Vivek publishers.
- Kulshreshtha S.P. (2009). Teaching of Science. Meerut: VinayRakheja publications.
- PPTs and Pdf s of the various topics (on MOODLE).

Unit-I

Lesson 1 Title Nature of Science a) Evolution of science as a discipline, science as a dynamic and expanding body of knowledge; development of scientific knowledge.

Time -2 lectures

Lesson 2 Title b) Science and technology, correlation between science and technology& other branches.

Time -2 lectures

Lesson 3 Title c) Common misconceptions of pupils about the nature of science; characteristics of different disciplines of science and their interrelationship.

Time -2 lectures

Assignment and Activities: Impact of Science and technology ***(Seminar Submissions)***

Evaluation: Evolution of science as a discipline, science as a dynamic and expanding body of knowledge; development of scientific knowledge.***(Submissions)***

Unit-II(11 lectures)

Feb 2024- March 2024

Summary of Unit:Curriculum of Science Education

- **Trends in science curriculum, considerations in developing learner centred curriculum in science.**
- **Criteria of validity of science curriculum: content, ethical, environmental, process, cognitive, historical**
- **Analysis of science curriculum at secondary stage.**

(11 lectures)

Objectives: After completion of the course, the prospective teacher educators will be able to

- understand the need to evaluate curricula and evaluate the same on the basis of different validities;
- know about and critically study innovative curricular efforts in India and abroad;

Resources:

- Kaur. R. (2007).Teaching of Science. Patiala: Twenty first century publications.
- Kohli V.K. (2003). How to teach science. Ambala: Vivek publishers.
- Kulshreshtha S.P. (2009). Teaching of Science. Meerut: VinayRakheja publications.
- PPTs and Pdf s of the various topics (on MOODLE).

Unit-II

Curriculum of Science Education (11 lectures)

Lesson 1 Title a) Trends in science curriculum, considerations in developing learner centred curriculum in science.

(3 lectures)

Lesson 2 Title b) Criteria of validity of science curriculum: content, ethical, environmental, process, cognitive, historical

(6 lectures)

Lesson 3 Title c) Analysis of science curriculum at secondary stage.

(2 lectures)

Assignment and Activities-Analysis of science curriculum at secondary stage**.**

(Submission)

Evaluation: Compare the Criteria of validity of science curriculum: content, ethical, environmental, process, cognitive, historical. *(Submission)*

Unit-III(24 lectures)

April 2024 May 2024

Summary of Unit:Approaches to Teaching-Learning of Science

- **Constructivist paradigm and its implications for science learning**
- **Constructivist approaches to science learning: inquiry method, problem solving strategies, guided discovery approach; inducto-deductive method, project based learning, cooperative collaborative learning.**

- **Role of experiments in science, development of laboratory design, planning and organisation of laboratory work, improvisation in the laboratory and low cost science experiments**
- **Metacognitive strategies-giving space to pupils to think, organize their knowledge and express teacher as a reflective practitioner.**
- **Use of ICT in teaching-learning of science concepts at secondary level.**

(24 lectures)

Objectives: After completion of the course, the prospective teacher educators will be able to

• understand diversity of instructional materials, their role and the need for contextualization in science education;

• appreciate the role of co-curricular activities in science education;

• explain the constructivist approach to science instruction;

Resources:

- Kaur. R. (2007).Teaching of Science. Patiala: Twenty first century publications.
- Kohli V.K. (2003). How to teach science. Ambala: Vivek publishers.
- Kulshreshtha S.P. (2009). Teaching of Science. Meerut: VinayRakheja publications.
- PPTs and Pdf s of the various topics (on MOODLE).

Unit-III

(24 lectures)

Approaches to Teaching-Learning of Science

Lesson 1 Title a) Constructivist paradigm and its implications for science learning

(3 lectures)

Lesson 2 Title b) Constructivist approaches to science learning: inquiry method, problem solving strategies guided discovery approach; inducto-deductive method, project based learning, cooperative collaborative learning.

(10 lectures)

Lesson 3 Title c) Role of experiments in science, development of laboratory design, planning and organisation of laboratory work, improvisation in the laboratory and low cost science experiments

(6 lectures)

Lesson 4 Title d) Metacognitive strategies-giving space to pupils to think, organize their knowledge and express the teacher as a reflective practitioner.

(3 lectures)

Lesson 5 Title e) Use of ICT in teaching-learning of science concepts at secondary level.

(2 lectures)

Assignment and Activities-Use of ICT in teaching-learning of science concepts at secondary level *(Submission)*

Evaluation: Constructivist approaches to science learning: inquiry method, problem solving strategies guided discovery approach; inducto-deductive method, project based learning, cooperative collaborative learning *(Submission)*

Unit-IV(10 lectures)

May 2024

Evaluation Assessment and Contemporary Issues in Science Education

Summary of Unit:

- **Evaluation in science: Formative and summative**
- **Self-assessment by students and by teachers, peer assessment, assessment of teachers by students.**
- **Contribution of Indian scientists**
- **Scientific and technological literacy**
- **Innovations and creativity in science.**

(10 lectures)

Objectives: After completion of the course, the prospective teacher educators will be able to

- understand the role of assessment in the teaching –learning process in science
- familiarize with innovative trends in assessment;
- analyze issues in Science education pertaining to equity and access, gender,special groups and ethical aspects.

Resources:

- Kaur. R. (2007).Teaching of Science. Patiala: Twenty first century publications.
- Kohli V.K. (2003). How to teach science. Ambala: Vivek publishers.
- Kulshreshtha S.P. (2009). Teaching of Science. Meerut: VinayRakheja publications.
- PPTs and Pdf s of the various topics (on MOODLE).

Unit-IV

Evaluation Assessment and Contemporary Issues in Science Education

Lesson 1 Title a) Evaluation in science: Formative and summative

(2 lectures)

Lesson 2 Title b) Self-assessment by students and by teachers, peer assessment, assessment of teachers by students.

(2 lectures)

Lesson 3 Title c) Contribution of Indian scientists

(2 lectures)

Lesson 4 Title d) Scientific and technological literacy

(2 lectures)

Lesson 4 Title e) Innovations and creativity in science. (2 lectures)

Assignment and Activities-Contribution of Indian scientists.*(Submission)*

Evaluation: Self-assessment by students and by teachers, peer assessment, assessment of teachers by students. *(Submission)*

Sessional work:

- *Development of lesson plan*
- *Development of an achievement test . (To be submitted by April 2024)*