



Content - Semester 4

The fourth Semester (S_4) of the D.Ed course designed in the semester pattern falls every year from November to March. All papers will have continuous evaluation, Though all papers will not have public examination. Given below are details of different papers of fourth semester (S_4).

10.1 Details of Papers of the Fourth Semester (S_4)

There are 3 papers suggested in the fourth semester (S_4). A paper titled "Language Proficiency" related to the study of mother-tongue and another paper

entitled "Teacher - Professional Development" related to the study of English language are suggested. The teacher-student may select one related to Mathematics, Social Science, General Science for study. The papers given below may be selected as optional:

- Teaching mathematics - Theory and Practice.
- Learning of Social science Theory and Practice.
- General Science - Applications

10.2 Semester four (S_4) Papers - Score details

No.	Paper No.	Name of Paper	Score Details		
			Continuous Evaluation	Theory Exams	Total
1	$S_4 \cdot P_{20}$	Language Proficiency	20	-	20
2	$S_4 \cdot P_{21}$	Teacher-Professional Development	20	60	80
3	$S_4 \cdot P_{22}$	a. Teaching Mathematics - Theory and Practice/ b. Learning of Social Science- Theory and Practice/ c. General Science - Applications	20	60	80
		Total	60	120	180
		Internship			200
		Total	60	120	380

Of the 3 subjects in fourth semester there will be a public exam (Score 60 each) and continuous evaluation (Score 20 each) for the paper related to study of English Language and for the optional subjects Mathematics/Social Science/ Science. The paper related to the study of mother tongue will have continuous evaluation (Score 20) only.

Teaching practice in the fourth semester must be carried out at the LP, UP level. Total score is 200. Details are given in Chapter 4.

10.3 Details Regarding each paper of the Fourth Semester

10.3.1 Mother-Tongue Learning

The paper 'Language Proficiency' has been suggested for the student teacher to have a sound basis of mother tongue, in the fourth semester. Details are given below.

Paper No.	Name of Paper
S ₄ .P ₂₀	Language Proficiency
Total Score	: 20 (continuous evaluation only)
Total Semester Time	: 70 hours
Time for each week	: 5 hours

Content

- Unit 1** : Effective Communication (20 hours)
- Unit 2** : Summarising and Elaborating Concepts (10 hours)
- Unit 3** : Language and Science (10 hours)
- Unit 4** : Language of Media (15 hours)
- Unit 5** : Malayalam Computing (15 hours)

S₄.P₂₀ Language Proficiency - Unit Details

Content	Transaction
<p>Unit 1 : Effective Communication (20 hours) Oral</p> <ul style="list-style-type: none"> • Appropriate voice modulation • Accuracy in Pronunciation • Selection of apt words • Perfection of idea • Appropriate arrangement of sentences and ideas • Body language <p>Written</p> <ul style="list-style-type: none"> • Different language texts • Descriptive • Argumentative • Explanatory • Critical • The vocabulary, structure, linguistic techniques used in these. <p>Unit 2 : Summarising and Elaborating Concepts (10 hours)</p> <p>Summarising focused on different needs.</p> <p>Expansion Proverbs Concept indicators Poetic extract Can be expanded - understanding of ability to elaborate, ability to interpret</p>	<ul style="list-style-type: none"> • How can non verbal/paralinguistic factors of language be made use of for effective communication? • Analyses various speech models • Records on video and evaluates one minute speeches of student teachers • Evaluates performance in discussions, debates, speeches • How can questions be made use of to lead to deviant thinking and concepts • Makes oral presentation on perspectives of contemporary issues • Identifies approach, analytical method, linguistic features etc. in different critical writings • In what ways are linguistic components used in different texts? • Analyses texts of different kinds. • How is language used to persuade the reader to take a definite stand? • Identifies different ways of presenting concepts • Presents perspectives on contemporary events in different models • Analyses the correlation between titles, sub titles, paragraphs, conclusion etc. in a creative work and the mutual relationship between sentences <ul style="list-style-type: none"> • How can proverbs, sayings etc be made use of for concept summarisation? • Writes summary of ideas in different types of articles, reports etc. • Presents the consolidated ideas as slide presentations. • Prepares notes, articles etc developing briefly stated ideas, indicators, proverbs, poetic extracts etc. • The method of providing abstract in projects helps for a quick comprehension of the summary.

Content	Transaction
<p>Unit 3 : Language and Science (10 hours)</p> <ul style="list-style-type: none"> o Language required to present concepts in science o Vocabulary of Science & Technology - characteristics o Language structures, methods for expressing information, classification, concepts etc. o Terms of administrative language. <p>Unit 4 : Media language (15 hours)</p> <ul style="list-style-type: none"> o Newspaper language o The pattern of language of radio programme o Language of advertisement o The difference created in language by different items in newspapers o Visual media (Short films, documentaries etc) o New media and language (Blog, twitter...) <p>Unit 5 : Malayalam Computing (15 hours)</p> <ul style="list-style-type: none"> o Malayalam Keyboard o Inscript, phonetic script devices o Various software for language study (including presentation software) 	<ul style="list-style-type: none"> • Is the scientific vocabulary of school textbooks effective to communicate scientific ideas? • Explains scientific concepts chosen from different subjects orally and in writing. • Identifies scientific concepts presented in science articles and tabulates. • Identifies possibilities of communication of concepts through charts, tables and other visual forms • Are there differences in the language according to nature of media (newspaper, radio, television)? • Analysing short film, documentaries etc and identifying classroom possibilities. • Analysing advertisements, finding out the ideas they promote and the interests behind them and conducting debate. • Creating class level newspapers • Planning school radio programme • Preparing scripts • Uploading one's creative writings in the new media and recording feedback. • Practical training in Malayalam computing • Computerising documents • Preparing slide presentation and presenting • Formulating activities, equipment for children requiring special consideration using different software • Familiarising various software for educational purpose

10.3.2 Teaching of English

As a part of English Language Education, in Semester 4, the paper 'Teacher Professional Development' is suggested for learning. The details are given below.

S ₄ .P ₂₁	
S₄.P₂₁	Teacher - Professional Development
Total Score	: 80 (CE 20 + TE 60)
Total Semester time	: 120 hrs.
Time in one week	: 9 hrs.

Content

- Unit 1** Language Elements for Effective Communication (Time 65 hrs.)
- Unit 2** Continuing Professional Development (Time 55 hrs.)

S₄.P₂₁ Teacher - Professional Development - Unit Details

Content area	Method of transaction
<p>Teacher Professional Development</p> <p>Unit 1: Language Elements for Effective Communication (Time 65 hrs.)</p> <p>a) Word labelling Subtopics Categorical labeling - noun, pronoun, adjective, verb etc. Functional labeling - subject, verb, object, adverbial, complement</p> <p>b) Noun phrase (NP) and Verb Phrase (VP) Subtopics Modifiers: pre-determiners, determiners, adjectives Prepositional Phrases (PP), Relative clauses Helping verbs,</p>	<ul style="list-style-type: none"> • This paper has two components - language elements and teacher development. The grammar component will be transacted, in an integrated manner by discussing the language forms in relation to language use and function. The activities will involve the student teachers in discovering the rules of English language usage on their own. This paper enables the student teachers to acquire the knowledge and skills to be a professional in his/her field. The teacher development component aims at facilitating learning through reflection. It encourages them to reflect on their teaching learning practices and provides them with opportunities to improve or modify them through collaborative effort. This paper aims to hone the professional skills of the student teachers. • Teacher educator distributes cards containing different categories of words (noun, pronouns, adjectives etc.) Student teachers are asked to make as many meaningful sentences as possible using the cards. Teacher educator then asks the student teachers to label the words in the sentences according to which category they belong to. (E.g. as noun, pronoun, adjective, verb etc.) They are also asked to find out the function of the word/word clusters in the sentence. (E.g. as subject, verb, object, adverbial and compliment) Teacher educator distributes work sheets containing passages taken from the text books to the student teachers. They are asked to analyze each sentence in the passage and give categorical and functional labels to the words/word clusters in them. • Teacher educator distributes subject - verb cards (e.g. a black cat) and verb (is running). The student teachers are divided into groups and asked to make meaningful sentences using the cards Student teachers further analyses 10 - 15 simple sentences in the textbooks and marks them as noun phrase and verb phrase Then they analyses the components of Noun phrase and identifies the pre-determiners, determiners and adjectives in the pre-nominal position (before noun) and prepositional phrase and relative clause in the post-nominal position Teacher educator distributes worksheet with jumbled noun phrases in a sentences and asks student teachers to put them in order and substantiate the changes they make in ordering the jumbled noun phrases in the subject position and predicate position of the sentences

Content area	Method of transaction
<p>c) Types of sentences Subtopics Declarative, interrogative, imperative and exclamatory sentences</p> <p>d) Structural and functional aspects Subtopics Different structures for one function Different functions of one structure</p> <p>e) Time, tense, aspect and mood Subtopics Tense forms, progressive and perfective aspects, modal auxiliaries</p> <p>f) Reporting and passivizing Subtopics Direct speech, indirect speech Active voice and passive voice - form and function</p>	<ul style="list-style-type: none"> • Student teachers analyze a reading text and categorize sentences under the four heads: declarative, interrogative, imperative and exclamatory and discuss the difference in form, function and punctuation mark. They further discuss the different types of interrogative sentences. Teacher educator distributes a worksheet and asks the student teachers to change the statements (declaratives) into auxiliary questions (yes/no question) and substantiate the changes. • Teacher educator initiates a discussion on structural and functional spirals (e.g. one structure with different functions as in the case of the structure 'can' for showing the functions ability, permission, assumption etc. and the function 'requesting' can be expressed using different structures like can, could, would you mind etc.) Teacher educator plays the audio of a piece of conversation. Student teachers are instructed to identify the structure and function of language elements in it. Teacher educator distributes work sheets based on passages from the text book. Student teachers identify the structure and function of different language elements in the given text and prepares a web showing the different functions of each structure and the different structures that can be used to indicate a function • Student teachers read the article available in the link http://web.khu.ac.kr/~jongbok/teaching/2007-grammar/tense-aspect.pdf and discuss the concepts time, tense, aspect and mood. Teacher educator presents ideas of time, tense and mood. Student Teachers record their observations in the reflective journal. Teacher educator distributes simple short stories to the student teachers and asks student teachers to narrate the story. While narrating they have to change the verbs in the stories from present to past and past to present and change/omit the time adverbials accordingly. Peers assess the narration and give feedbacks. • Teacher educator asks the student teacher to role play a conversation. Student teachers report the conversation. They notice and write down the changes they made in reporting the conversation. Teacher educator screens video clipping of a conversation from a film. Student teachers are asked to report the conversation. Teacher educator screens the video in you tube on reported speech (Jennifer ESLs Channel). Student teachers are asked to prepare a write-up on the changes to be made in tense, reporting verb, pronoun etc. while reporting direct speech.

Content area	Method of transaction
<p>g) Editing Subtopics Punctuation, syntax, morphology, spelling</p> <p>h) Teaching Grammar Subtopics Inductive and deductive methods of teaching language elements</p>	<p>Teacher educator distributes worksheets that contains dialogues between characters and asks student teachers to report these dialogues.</p> <p>Teacher educator distributes recipes of different dishes such as chutney, salad, sambar, pickle etc. to the student teachers. Student teachers are asked to present the process of making the dish using the ingredients. Peers record the changes.</p> <p>Teacher educator screens the video on You Tube on passive voice (Jennifer ESLs Channel) and initiates a discussion on passivizing and its functions and observations are recorded in the reflective journal.</p> <p>Student teachers are asked to go through English newspapers to find out instances of passivizing in them. They are asked to prepare a write up on the contexts in which passive voice is used.</p> <ul style="list-style-type: none"> Teacher educator initiates a discussion on various stages of editing. Then student teachers collect samples of learner products (different discourses) of classes 6, 7 and 8. They are asked to go through the learner products, identify and classify the errors as errors of punctuation, morphology, syntax and spelling. Student teachers stimulate the process of editing in the peer groups. Others provide feedback Teacher educator distributes a hand out on the process of editing given in the handbooks. Student teachers read the hand out and make presentation on addressing learners' errors Student teachers critically analyze one unit in different grammar books based on: treatment, organization, variety, opportunity to discover rules etc.(Grammar books recommended; High school grammar by wren and Martin, Contemporary English grammar by David Green, Intermediate English grammar by Raymond Murphy, Practical English Usage by Michael Swan). Presentation of cases by the teacher educator in which grammar is taught emphasizing rules and another case where grammar is taught in meaningful context. Teacher educator initiates a discussion by asking questions on the importance of teaching grammar in meaningful contexts. Student teachers make presentation on the differences between form focused and meaning focused approaches to the teaching of language elements.

Content area	Method of transaction
<p>Unit 2. Continuing Professional Development (Time 55 hrs.)</p> <p>a) Professional development</p> <p>Subtopics Keeping abreast of changes in ELT, ICT, alternative models in language teaching, best practices across the globe</p> <p>CPD - Continuing Professional Development</p> <p>b) Information Communication Technology</p> <p>Subtopics Basic computer literacy, preparing presentations, accessing web sites such as wikis, creating blogs, accessing you-tube, teacher-tube, podcasts and down loading, uploading, editing resources Hypertext</p>	<p>Teacher educator screens the video in You Tube (Jennifer ESLs Channel http://www.youtube.com/watch?v=bkA8dFYMAZc&list=PLF467A1F872AFF222) Student teachers are asked to prepare a write-up on how language elements are taught focusing on meaning. Student teachers plan similar lessons for teaching language elements of their choice in peer groups. Others observe the class and give feedback.</p> <ul style="list-style-type: none"> Teacher educator screens videos-Starfish an inspirational message for all teachers (https://www.youtube.com/watch?v=9nZkq31J-GY) and Peacock in the land of penguins (https://www.youtube.com/watch?v=KtepBBI6n0w) and initiates a discussion on the changing roles of teachers as mentors Teacher educator asks student teachers to reflect on their school days and talk about the teachers who influenced their life. They are asked to list down the qualities of those teachers Teacher educator initiates a discussion and conducts a concept mapping activity to find out the traits of a good teacher (in terms of vision, knowledge of subject matter, empathy, confidence, communicational skills, time management, planning, community involvement, vision etc.) Teacher educator makes a presentation on 'Continuing Professional Development' highlighting the need for attending Courses/workshops, Education conferences or seminars, Observation visits to other schools, Participation in a network of teachers, Individual or collaborative action research on a topic of professional interest, Mentoring and/or peer observation and coaching, Reading professional literature (e.g. journals, evidence-based papers, thesis etc.) Student teachers collect copies of ELT journals published in India or abroad and present them in class for discussion and Student Teachers are encouraged to organize ELT conference in their institution. Teacher educator initiates discussion on the advantages of using ICT for effective learning (variety of resources, effective and impressive presentations, self-access materials etc.) and disadvantages (Technical issues, lack of human feedback, lack of training etc.) Student teachers are asked to prepare a write-up on the advantages and disadvantages of using ICT in classrooms. They have to type the write-up with minimum layout in word processor and present the major points using a presentation software. They are also asked to prepare a spread sheet showing details of the learners they have taught during teaching practice and sort it using different criteria. They have to publish it in the institute's blog.

Content area	Method of transaction
<p>c) The self and the teacher Subtopics Self-analysis, mentoring, maintaining reflective journal</p> <p>d) Action research Subtopics Investigating learner/learning issues, problem solving, informal and formal strategies to arrive at solutions to specific problems</p>	<p>Student teachers are asked to evaluate Websites for Authenticity, Accuracy, themes, intended audience, feature etc. Browsing and evaluation of the following web resources are suggested (Larry Ferlazzo's websites of the day(http://larryferlazzo.edublogs.org) Madness in the Method(http://mrscaldwell0.edublogs.org/), Grammar Guy(http://azargrammar.com/grammarGuy), An A-Z of ELT (http://scottthornbury.wordpress.com), Educational wikis (http://educationalwikis.wikispaces.com/ Practicing listening & speaking with online audio http://www.britishcouncil.org/learnenglish-podcasts-elementary.htm)</p> <p>Student teachers select a text of their choice from the textbooks and hyperlink it audio, video files and other web resources for teaching in peer groups. They simulate the transaction of the hyperlinked text in groups. Others observe and give feedback.</p> <ul style="list-style-type: none"> • Teacher educator distributes the hand out "Reflective teaching: Exploring our own classroom practice" (http://www.teachingenglish.org.uk/articles/reflective-teaching-exploring-our-own-classroom-practice) Teacher educator initiates discussion on the importance of reflective practices in CPD and Student Teachers note down their observations in reflective journal. <p>Teacher educators maintain a Reflective journal specifying objectives, teaching philosophy, the changes they would like to make in their practice, What has gone to plan and what hasn't, What has worked/ hasn't worked, What has changed, What differences have been made etc. Student teachers will reflect and record entries in their journal based on their perspective, as viewed by their peers, from the perspective of the learners and from theoretical point of view. (Reference: Guidelines for continuing CPD- www.ifl.ac.uk)</p> <p>Teacher educator initiates a discussion on mentoring and asks learners to reflect on their mentoring experience they have gained right from second semester</p> <ul style="list-style-type: none"> • Discussion and presentation by the teacher educator on action research <p>Student teachers identify a class room/learning related problem and conduct an action research individually or in groups keeping the steps of action research, identifying and stating the problem with a clear strategy to implement it within their classrooms. Specific feedback and reporting to be submitted to the school/teacher educator via e-mail on the completion of different stages of action research. Sharing and collaboration, group work, team teaching, networking, teacher resource groups etc. to be formed to resolve the issues studied.</p>

Suggested Reading

- Books on grammar and Language elements
- Andrew Radford (2007), English Syntax an Introduction, Cambridge
- Cook, G (1989) - Discourse, Oxford University Press
- George Yule (1998) Explaining English Grammar, Oxford University Press
- Jones, Leo, Functions of English, Great Britain, Cambridge University Press, 1997
- Michael Swan (1989) Practical English Usage, Oxford University Press
- Books on Teacher Development
- Guidelines for continuing CPD- www.ifl.ac.uk
- Hunter, Madeline. (1967). Teach More- Faster. Corwin Press.
- Richards, C Jack and Charles Lockhart. (1994) Reflective Teaching in Second Language Classrooms. CUP.
- Richards, C Jack and David Nunan. (1990). Second Language Teacher Education. CUP.
- Russell, Tom and Hugh Munby. (1992). Teachers and Teaching: From Classroom to Reflection. The Palmer Press.
- Spratt, Mary. (1994). English for the Teacher. CUP.

10.3.3 Teaching Mathematics/Teaching Social Science/Teaching General Science

These are the subjects that the student teacher can select as optional to make teaching at the upper primary level effective. The teacher student chooses one among these papers for study.

Paper No	Name of Paper
S ₄ .P ₂₂	b. Learning Social Science - Theory and Practice/ c. General Science - Application
Total score for each Subject	: 80 (Continuous evaluation 20 + Public exam 60)
Total Semester time	: 110 hours
Time for each week	: 8 hours

S₄.P₂₂ (a) Teaching Mathematics - Theory and Practice

Total Score : 80 (Continuous Evaluation 20 + Public exam 60)

Total Semester time : 110 hours

Time for each week : 8 hours

Content

Unit 1 : Arithmetics - Learning and Teaching in Practice
(Time 20 hours)

Unit 2 : Algebra - Learning and Teaching in Practice
(Time 20 hours)

Unit 3 : Geometry - Learning and Teaching in Practice
(Time 20 hours)

Unit 4 : Extension activities in Mathematics (Time 10 hours)

Unit 5 : Evaluation - Upper Primary Level (Time 10 hours)

Unit 6 : Teaching Mathematics - Planning - Upper Primary level (Time 30 hours)

S₄.P₂₂ (a) Teaching Mathematical Science - Theory and Practice - Unit Details

Content	Transaction
<p>Unit 1 : Arithmetics - Learning and Teaching in Practice (Time - 20 hours)</p> <ul style="list-style-type: none"> • Understanding and transaction of topics related to arithmetics in the objectives of curricula for classes 6 to 8 (Arithmetical relations, formulation and solving of simple equations, problem solving.) • The application of mathematical approach and techniques in the teaching of arithmetics <p>Unit 2 - Algebra - Learning and Teaching in Practice (Time 20 hours)</p> <ul style="list-style-type: none"> • Understanding and transacting objectives of curriculum related to algebra for classes 6 to 8 (handling data, average, table reading, integers, fractions, decimals, percentage, proportion, ratio, interest, discount, time and distance, profit and loss) • The practicality of mathematical approaches and techniques in teaching algebra. 	<ul style="list-style-type: none"> • Gains proficiency in identifying teaching methods and techniques to reinforce content knowledge related to arithmetics its application in children. Creates an understanding and appreciation of the study and teaching of arithmetics ▲ How can arithmetical relations be presented in the geometrical language? Explain giving examples. ▲ What are the activities that students and teachers engage in a maths class employing the mathematical approach and different techniques and methods effectively? ■ Formulates the analysis, lesson plan, tools required for unit tests, study equipment etc related to arithmetics of classes 6 to 8, improve by sharing among group and tries out in a workshop. ■ Conducting preparations for practical research, identifying problems and suggesting solutions. ■ Assimilates ideas related to algebra and application in daily life. Gains proficiency in identifying teaching methods and techniques of algebra and teaching. ▲ How can algebra be related to other branches of mathematics? ▲ What ideas should teachers form to equip students for using algebraic ideas in daily life? Formulates the analysis, lesson plan, tools required for unit tests, study equipment etc related to arithmetics of classes 6 to 8, Improves by sharing among group and trying out..

Content	Transaction
<p>Unit 3 : Geometry - Learning and Teaching in Practice (Time - 20 hours)</p> <ul style="list-style-type: none"> • The understanding and transaction of objectives in curriculum related to geometry for classes 6 to 8. Geometrical thought, two - dimensional, three-dimensional figures, geometrical terms, concepts and similarity, change of shape in geometry, geometrical shapes and qualities (Area, Volume, Circumference), Construction of Geometrical Shapes. • The application of mathematical approaches and techniques in geometry teaching. <p>Unit 4 : Extension activities in Mathematics (Time - 10 hours)</p> <ul style="list-style-type: none"> • The curriculum and classroom experiences of classes 6 to 8 • The importance of mathematics textbooks • Maths Laboratory/Maths club/Resource Room/Maths Fair • Underachievement in learning of mathematics and solutions. • Effective and enjoyable study of mathematics. 	<ul style="list-style-type: none"> ▲ The students should possess the necessary skills to acquire the concepts presented in class. Why? What are the ideas students must possess in advance before division of decimals is presented in class? ▲ Gains skills in constructing different geometrical shapes. • Making use of ICT possibilities to enhance appreciation of geometrical patterns and identify the dynamic nature of geometry. • How can the Dr. Geo/Geogebra/ICT possibilities be made use of to identify dynamic nature of geometry? ▲ All congruent shapes are similar. All similar shapes are not congruent. Substantiate. ▲ What is the relevance of formulae in mathematical study? Should it be memorized? ■ Formulates, improves and tries out the pedagogical analysis, lesson plan, study equipment, tools for unit tests etc of the different units related to geometry at UP level. ■ Gains skill to efficiently transact the content on the basis of individual differences. • Finds out the features of textbooks and form a good text. • Equips children to set up Laboratory/Resource Room in the best way and carry out experiments undertaken. ■ Analyses the textbooks of classes 6 to 8 forming groups and identifies the importance of textbook in the study of Mathematics. ■ Assimilates concepts of Maths by observing Maths Day and identifies the appreciation level of Maths through activities like Maths Club, Maths Fair, Maths Library etc. ▲ What are the items of a good Maths Lab? What are the experiments/activities that students can carry out in the Maths Lab? ▲ What are the qualities essential for a good maths textbook? ■ Analyses the textbook at the UP level based on it ■ Organises institution level Maths Fair ■ Organises District level ITE Maths Fair.

Content	Transaction
<p>Unit 5 - Evaluation - Upper Primary Level (10 hrs.)</p> <ul style="list-style-type: none"> • Continuous Evaluation • Term Evaluation • Areas of Evaluation, Indicators, Grading, Evaluation Devices - preparation • Recording Evaluation results and analysing • Remedial activities • Transacting evaluation result. <p>Unit 6 - Teaching Mathematics - Planning Upper Primary Level (Time - 30 hours)</p> <ul style="list-style-type: none"> • Necessity and significance of planning • Annual Planning • Unit Planning • Analysis of Pedagogical content • Teaching Manual (Including activities for the children with special needs) • Class Analysis Record 	<ul style="list-style-type: none"> • Forms an idea of how novel evaluation devices can be formed. • Able to conduct evaluation in different ways, to prepare progress report and suggest remedial measures. ■ Familiarizes the different evaluation methods and devices used in classes 6 to 8 - Seminar. ■ Is term evaluation necessary along with continuous evaluation? ■ Prepares different evaluation devices (unit test) through workshop. ■ Identifies areas where students committed mistakes and suggests remedial measures through group discussion. ▲ What should be remembered while preparing an evaluation tool? ▲ How can evaluation activities be prepared taking into consideration students of different standards? ▲ Learning is evaluation, is learning - Substantiate. ■ Enables identifying, planning and using teaching methods and techniques required for the transaction of mathematics at the upper primary level. • Using possibilities for getting children with special needs actively involved in learning activities. ▲ How much does the class analysis of the teacher educator/fellow student help to make the teaching process better? ▲ What is the role of planning in the teaching - learning process? ■ Analysis of pedagogical content - through group discussion. ■ Formulates annual planning, unit planning, lesson plan, teaching manual through workshops. ■ Improves Teaching Manual through try-outs

Semester 4 Mathematics - CE Items

Learning Equipment (Used during teacher training)

Unit Test

Pedagogic Analysis

Teaching manual

Class Analysis Record

Textbook Analysis Report

Teaching Manual using ICT Possibilities

Maths Club Activities

Observing Days Report

Maths Notebook (give 10 scores for each item and record Total Score on 20)

S₄.P₂₂. (b) Teaching Social Science Theory and Practice

Total Score : 80 (Continuous Evaluation 20 + Public exam 60)

Total Semester time : 110 hours

Time for each week : 8 hours

Content

Unit 1 : History (Time 30 hours)

Unit 2 : Geography - Nature, Objectives, Learning Methods (Time 30 hours)

Unit 3 : Lesson Plan and Analysis (Time 30 hours)

Unit 4 : Teaching techniques and learning material (Time 20 hours)

S₄.P₂₂ (b) Teaching Social Science - Principle and Practice - Unit Details

Content	Transaction
<p>Unit 1 - History (Time 15 hours)</p> <ul style="list-style-type: none"> • Nature and aims of History - Historical Method - process of inferring from evidences - Need for study of history (The ahistorical and historical period division) • Organizing concepts of History (Cause and consequences) - Similarities and Differences - Significance - Motives - Evidence - Basic Historical Concepts (Feudalism, Colonialism, Kingship, Democracy) • Approaches, methods of teaching history • Sources of history study (Literature, Individual History, Oral History, Archeological objects, pictures, photos, historical documents etc.) • Theories for interpreting history. <ol style="list-style-type: none"> 1. Analyse processes that shape the society 2. Find the basic changes and deviations (eg: the transformation from line of descent through nephews to line of descent through sons, from small provinces to nations under kings rule) 3. Understanding the importance of individuals and communities of the past 4. Explaining thoughts and individuals in the historical background. 	<ul style="list-style-type: none"> • The study of how social, economic, political organization and processes of the human race transformed along ages in history. • The content of history is the transaction between individuals, groups, nations etc. ▲ How is progress achieved in various fields by man today related to ancient history? • Examines historical perspectives, discuss how perspectives differ and why different perspectives occur. • Creates pedagogical techniques to form idea about cause and consequences, similarities and differences, significance, motives, evidence etc from historical descriptions. • Examines whether the most simple concepts related to basic historical ideas can be presented in the primary classes, and preparing appropriate study material. • Analyses how organising concepts are applied in different historical descriptions. • Analyses how facts, details etc are elaborated in historical data • Finds out examples of different theories of interpretation from history books. • Analyses the explanations given by school students for historical facts.

Content	Transaction
<p>5) Analysing the complex transactions between individuals and social groups.</p> <p>6) Realizing how historical accounts are formulated.</p> <ul style="list-style-type: none"> • Concepts about teaching of history <p>1) Understand how students' awareness of history evolve.</p> <p>2) Understand the ideas and awareness among students about history.</p> <ul style="list-style-type: none"> • Regional history The method of historical account of own region • Growth and evolution of human civilization • Old stone age, new stone age, bronze age - Iron age. Peculiarities- human progress in the middle ages and modern age. • Continuation and change in history - How are continuation and change reflected in the history of Kerala and India? Revolution, Renaissance, Industrial Revolution, Mass protests etc - basic changes and milestones - historical events, forces that caused them - social, cultural changes and history. • Authority, government, tribal government, feudalism, colonialism, democracy, colonisation, beginning of colonisation - in Kerala - Indian National Movement, getting Independence, framing the constitution, united Kerala movement, The Thirukochi State - Formation of Kerala State, Vaikom Satyagraham, Guruvayur Satyagraha, Kundara Proclamation, Untouchability movement. 	<ul style="list-style-type: none"> • Realizing that there is an ancient history in the progress of one's own region and that individuals played a role in the growth and development of lifestyle, vocational institutions etc. • Discussing how regional history can be related to wider historical concepts and presenting them. ▲ What is the relevance of regional history in study of history? ▲ What are the processes involved in preparing regional history? Which areas can be covered in regional history?. The role of regional history in the transaction of curriculum to what extent? ■ Finds out the features of regional history documentation by analysing a few regional history records. • Prepares lesson plan to transact the idea of human progress. ■ Analyses content provided in textbooks about growth and evolution of human civilization and identifying broad ideas gained by the learner. ■ Examines curricular extracts, textbooks related to areas like revolutions, renaissance, industrial revolution and evaluating pedagogical approaches. ■ Conducts ICT presentation to explain the concept that history is the study about continuity and change. ■ Identifies historical concepts in different subjects to the curriculum from primary level and creating appropriate teaching methods. ■ Discusses with supporting examples the facts, teaching methods essential for presenting the biography of regional leaders related to the national movement. ■ Presents the concepts government, Authority, Invasion etc in the background of Kerala history, Indian history. Prepares lesson plan to transact the concept Monarchy at the upper primary level. ■ Prepares graphic chart to explain lifestyles during the various ages. ■ Collect ideas on lifestyles of people of old/new-bronze ages from study of historical books and organise seminar.

Content	Transaction
<ul style="list-style-type: none"> • History and the structure of society, content related to society, classes of people, social institutions, social structure, social progress, employment, economic structure in the areas of Indian History and World History. • The relevance of secularism - inequalities and discrimination <p>Unit 2 Geography - Nature, Objectives, Learning Methods Nature of Geography (Time 30 hours)</p> <ul style="list-style-type: none"> • (The study of the relation of man with his environment - how man's physical environment influences him - man's attempts to transform his physical surroundings to suit him - how the transactions of between human beings in the context of his physical surroundings create economic, cultural, social, political fields. 	<ul style="list-style-type: none"> ■ Prepares learning activities that enable to compare foreign rule, regional kingship, landlordism, democracy etc. ■ Presents concepts, preparing lesson plan, formulating techniques of teaching. ■ Finds out broader ideas by preparing graphic presentations explaining the economic development, changes in the demographic structure etc in India and Kerala. <ul style="list-style-type: none"> • Identifies concepts that form the basis of geography. • Realizes that man is the pivotal centre of learning of geography. ■ Finds out geographical concepts reflected in newspaper details - Identifying the importance of geography in the economic, social political, cultural fields. ■ Presentation about how knowledge of geography can be made use of for solving some of the recent political/social/cultural/environmental problems. (eg : mining of ilmenite, Endosulphan, filling water pits, uncontrolled levelling of hills, rock breaking, deforestation).

Content	Transaction
<ul style="list-style-type: none"> • Geography as a core subject <p>Objectives of Geography</p> <ul style="list-style-type: none"> • Local environment, regional environment, wider environment - developing knowledge and insight on these and their mutual relationship. • Develop insight about the variety in natural and human community • Develop a humanistic approach to human beings of different environment - create awareness about man's mutual interdependence • Develop awareness about place and time. • Developing awareness about resource mapping and resource planning. • Develop a conservation approach and commitment towards environment - identify environmental issues and promote measures to discuss, prevent, solve them. • Inculcate varied transaction skills (especially maps, presentation of data through pictures etc) • Understand geographical concepts 	<ul style="list-style-type: none"> ■ Explaining diversity, importance, practical use of geography by comparing the content/ concepts of selected areas. ■ Analyses how geographical concepts are used to explain other subjects and identify the similarities and differences with the explanations in geography. ■ Conducts presentation explaining how concepts in other subjects can be utilized in geography. ■ Constructs learning/teaching aids for the transaction of basic concepts of geography. <ul style="list-style-type: none"> ■ Analyses how the objectives of geography are reflected in different learning activities. ■ Prepares lesson plan records for transacting the most simple level of concepts about place and time to primary students.

Content	Transaction
<p>Development of concept and skill in the geography curriculum</p> <ul style="list-style-type: none"> • A sense of place and time. Understand the essential characteristics of different places. Understand how different landscapes are formed as a result of natural process and the response to man's activity, identify how man's motives, beliefs, values, attitudes of man; affects human activities related to geography, identify the individuality of a place. ■ Maps, globes, graphical skills • Minute skills to be developed through the study of geography - Geography investigative skills (questioning, observing, predicting, investigating, estimating, measuring, analysing) • Regional geography - approaches, methods. • Basic understanding about contemporary approaches in geography (Area analysis, spatial analysis, physical and human systems, human environment interaction) • Instruments, devices used for the collection, analysis, presentation of details of the earth (Geographic grid, GPS, GIS, Maps) • Weather and climate factors influencing weather, temperature, atmospheric pressure, humidity, winds etc. • Landsdapes - mountains, plains, plateaus. • Biosphere and biogeochemical cycles. 	<ul style="list-style-type: none"> ■ Prepares maps of different kinds. ■ Examines the competence of students at different levels by preparing questions to identify how much the maps provided in the textbook is helpful for forming concept. ■ Examines different perspectives on geographical phenomena. ■ Prepares learning activities to develop investigative skills in geography. ■ Analyses the possibilities of applying each approach on selected concept areas in the geography curriculum and preparing presentation. ■ Prepares learning activities to equip students to use different instruments, devices in learning. Explaining the details, concepts, skills achieved through them. ■ Creates activities related to the students' environment that help formulate basic ideas about weather. Explains teaching techniques essential to arrive at the concepts through the activities. ■ ICT presentation on essential sources, learning experiences etc to form an idea about physical features or earth. ■ Conducts a presentation on information, subconcepts etc to formulate the concepts of circulation.

Content	Transaction
<ul style="list-style-type: none"> • Natural resources and environment protection. Characteristics of resources. Different types of resources, renewable and non-renewable, energy resources, water - forests, environment pollution - resources, nuclear energy. • Increase in population, migration : India, Kerala - based study. • Cultural Geography- cultures and environments-differences such as culture, race and religion-cultural exchanges • Current issues and the role of geography in resolving them - issues related to agriculture-food sources etc., food security-resource distribution and utilization-conflicts related to resources-political policies related to geography geo-politics-threats to biodiversity-health and geography <p>Unit 3 Lesson Plan and Analysis : Time 30 hrs</p> <ul style="list-style-type: none"> - Social Science Textbooks (Classes VI, VII, VIII) - Analysis - (Learning Objectives, Aims, Concepts related to Content, Teaching/learning process, Values, Attitudes, Evaluation) - Identifying concepts to be transacted - Identifies how much the experience is related to the concepts to be transacted. - Identifies the growth , extent, mutual relationship, integrated nature of concepts - Selection of teaching methods appropriate to transaction - Planning learning activities - sequencing, adaptation - Develop appropriate teaching learning tools - Application - Achievements and evaluation at every stage - Giving feedback 	<ul style="list-style-type: none"> ■ Prepares scheme of activity to develop concepts about pollution based on the environment pollution issues familiar to the student. ■ Analyses the major trends in this area on the basis of factual data. Discussing what should be the content of different levels of the curriculum and the teaching methods in this context. ■ Conducts presentation to explain influences of geography on culture. ■ Analyses regional as well as national contemporary issues and explains on the basis of geographical knowledge <ul style="list-style-type: none"> • Conduct certain activities related to different content areas. Plan learning activities.

Content	Transaction
<p>Unit 4 (Time 20 hours) Teaching techniques and learning material</p> <ul style="list-style-type: none"> • Problem Solving • Project • Mode of elocution • Forms of discussion • Role Play • Dramatisation, field trips • E-learning, blogging • Multimedia approach • ICT integrated learning • Possibilities of these in social science to be understood through application. (Active construction of knowledge by student-Role of student in teaching learning context) • Identifying and using different resources, maps, globe, course studies, pictures, stories, reference books, textbook, workbook, publications, newspaper, magazines, internet, different social science material. <div style="margin-left: 200px;"> <ul style="list-style-type: none"> • Seminar • Group Discussion • Debate • Panel Discussion • Symposium </div>	<ul style="list-style-type: none"> ■ Conduct certain activities related to different content areas

S₄·P₂₂ (c) General Science - Application

Content

Unit - 1 - Into the Science Textbook (40 hours)

1.1. Characteristics for Science Textbook

- Ensuring basic science concepts
- Based on psychological principles
- Activity based
- Ensuring processes
- Promoting open thought
- Child - friendly
- Attractive (Language, Picture, Layout)
- Ensuring ICT possibilities
- Considering CWSN children
- Having reference indications
- Promoting learning
- Considering regional possibilities
- Based on spiralling method
- Related to daily life.

1.2 Basic Concepts of Science

Forming an understanding of the basic concepts of Science through activities of different units of the D.Ed Curriculum - simple experiments, projects, concept mapping, observation, constructing learning material, collection, constructing science kit, seminar, ICT possibilities, constructing garden, constructing vegetable garden, medicinal garden etc.

Classification of animals - significance

Two Kingdom - Carl Linnaeus, Five Kingdom - Robert Whitaker, Binomial Nomenclature-

Eco system

Living organisms, Nonliving organism, food chain, food web, trophic levels, positive interaction, negative interaction, pollution-air, water, soil, sound-reasons, controlling measures.

Biodiversity

Biodiversity depletion - reasons

Methods for biodiversity conservation - biosphere reserves, wildlife sanctuaries, national parks, zoological park, botanical garden, gene banks.

IUCN, WWF, SPCA, Red Data book, bio diversity conservation laws, schemes, local species, significance, ecological hotspots, sustained development.

Plants

Green plants, photosynthesis

Seed germination, stages in plants (reproduction) pollination, pollen agents, seed dispersal

Results - simple result, compound result,

Nutrition

Autotrophism, Heterotrophism, food chain relations, regional food items, nutrition factors, poisoning of food, identification

Human Body

Digestive system, Digestion, Enzymes, Diseases that affect digestive system.

Nervous system

Brain, Nerves, structure of neuron, reflex action, defects of the nervous system - stroke, paralysis, Alzheimer's disease, Parkinson's disease, epilepsy.

Sense organs - eyes, ears, nose, tongue, skin, structure, function, diseases, remedy.

Skeletal system

Bones, Bone joints, first aid, disease affecting the skeletal system

Respiratory system

Parts of respiratory system, vital capacity, tidal volume, diseases affecting respiratory system.

Circulatory system

Heart, blood vessels, blood-structure, blood transfusion, blood donation - significance, lymph.

Health of the heart, blood groups, heartbeat, disease

Excretory system

Kidneys, Nephron (structure, function), disease.

Endocrine system

Hormone, functions, hormone variations

Cell Biology

Cell-structure, plant cell, animal cell, cell organs, cell division, chromosome, chromosome number, DNA, RNA

Tissues

Plant tissues - characteristics, functions - parenchyma, collenchyma, sclerenchyma, xylem, phloem, meristematic.

Animal tissues - characteristics, function, epithelial tissue, connective tissue, muscle tissue, nervous tissue.

Internal equilibrium

Homeostasis, osmosis, endosmosis, exosmosis, assimilation, active transport.

Diseases

Microorganisms, disease transmission, defensive measures, genetic diseases - sickle cell anaemia, haemophilia, cancer, genetic defects.

Agriculture

Hybrid plants, animals

Local varieties, merits.

Agriculture conservation - chemical fertilizers, organic fertilizers, bio fertilizers

Physical reproduction - budding, layering, grafting, tissue culture

Pests, pest control - mechanical, chemical, biological, collective farming, agriculture, pisciculture, apiculture, sericulture

Plant-animal diseases - causative agents, control measures

Agricultural research centres.

Water

Methods of water purification, water conservation methods, production of hydroelectric power

Water - solid state, liquid state, boiling point

Water - Specific heat capacity, universal solvent

Hardness of water - temporary hardness, permanent hardness, water cycle

Life

Origin of life, evolution, theories of evolution.

Light

Transparent, opaque, semi transparent objects, light reflection, image, different types of mirrors, solar eclipse, lunar eclipse, refraction, lenses, prism, primary colours, secondary colours, rainbows

Simple Machines

Inclined planes, pulleys, levers, classification

Magnetism

Magnet, characterises, uses, magnetism of the earth

Energy

Different types of energy, fuels, energy conservation, different types of fuels, kinetic energy, static energy, bio gas, solar panels, energy conservation, practical solution to overcome energy crisis

Mixtures

Types of mixtures, pure substances, elements, compounds, methods of separation

Metals

Metals - characteristics, malleability, ductility, prevention of metal corrosion, electroplating, conduction of heat, non-metals, nitrogen cycle, oxygen cycle, sulphur cycle, carbon cycle.

Chemical changes

Classification, chemical changes in daily life, consequences of chemical change in nature.

Molecule, Atom- Primary concept

Substances

Classification

Elements

Symbols, Periodic table, electronic configuration, atom structure, Dalton's concept

Model of atom - Bohr Model

Atomic number, mass number, Bonding, chemical formula, acids, alkalis, neutralisation, P^H value, acids and metals, carbonates - reaction among these.

Solutions

Solute, solvent, solution, saturated solution, unsaturated solution, concentrated solution, suspensions, pure solution, colloid, emulsion, artificial drinks.

Gases

Characteristics, Boyles' law, Charles's law, Avogadro's law.

Chemistry in daily life

Immunity health problems due to the use of medicines, drugs, panmasala, intoxicants etc.

Plastic - different types, glass-different types, green chemistry - importance, cosmetics, bad effects.

Thermal conductivity

Heat, conduction of heat, convection, conductivity, radiation, sea breeze,

land breeze, atmospheric pressure - application, liquid pressure, thermometer, good conductor, bad conductor

Electricity

Static electricity, electroscope, earthing, thunder lighting, lightning conductor, conductors, insulators, Volta cell, dry cell, electric power, fuse, discharge lamps, electromagnetic induction, electric power, power stations (water, heat, nuclear)

Sound

Ways of sound production, characteristics of sound, use (sonar, ultrasound scanning etc), sound transmission, sound pollution, musical instruments, sound intensity, decibel, echo.

Motion

Different types of movement, speed, velocity, Newton's laws of motion, friction, inertia.

Force

Different types of force, mass, weight, pressure, thrust, atmospheric pressure, barometer

1.3 New trends in Science

New discoveries, space voyages, importance of years, issues and consequences.

Unit 2 : Effective learning of Science (30 hrs)

2.1 Conducting class

Ideal class

Indicators of evaluation

- Deep understanding of the content
- Ensuring the scientific method
- Giving opportunity for raising questions
- Making use of different possibilities to present issues
- Presenting complex science concepts in the form of simple sub concepts

- Developing and making use of research oriented learning techniques taking into consideration the nature, interest and academic backwardness of students
- Using various techniques to examine the previous knowledge of students
- Leading to the discovering/acquiring of new knowledge by nurturing the student's thinking skills
- Exploiting the possibilities of Information and communication Technology.
- Preparing learning techniques on the basis of the theory of multifaceted intelligence
- Using appropriate practical activities and experiments
- Ensuring the development of mathematical skills and numerical awareness
- Developing communication skills
- Taking a stand after indepth study of debatable elements in a subject.
- Continuous inquiry of novel concepts in science
- Using different methods and tools for continuous evaluation

2.2 Towards excellence in teaching - Quality indicators

- Raising questions
- Presenting problems
- Using TLM
- Presenting Computer Science in a simple way
- Consolidation

2.3 Towards Planning

To develop conceptualising related to planning at various levels

School level Annual Planning

Unit Planning

Pedagogical analysis - relevance and importance

Tisting, developing of learning material.

Evaluation - methods, tools

Preparing pedagogical analysis

Daily Planning

Importance, structure formation

Identifying and developing learning material

Deciding the evaluation method

Developing tools, preparing TM

2.4 Class atmosphere - characteristics

- Independent and fearless class atmosphere
- Opportunity for independent communication
- Opportunity to exhibit learning products and learning evidences
- Effective use of devices and nature science learning

Unit 3

Science Class - Towards Practical experience (40 hrs)

3.1 Unit Planning (Pedagogic analysis)

- Structure
- Recording
- Process
- Evaluation
- Feedback

3.2 Daily Planning

- Structure
- Recording
- Process
- Evaluation
- Feedback

3.3 Evaluation

- Continuous Evaluation
- Term Evaluation
- Evaluation for learning
- Evaluation is learning
- Evaluation of learning
- Learning evidence - area of evaluation
- Evaluation methods, tools
- Record
- Reporting

3.4. Conducting class and evaluating

- Class atmosphere
- Class management
- TLM arrangement, using
- Following different stages of knowledge construction
- Continuous evaluation

3.5 Class Evaluation

- Class observation of Teacher Educator, Co-learner, and practising teacher
- Feedback presentation
- Preparing Class observation report

3.6 Internship

- Attached to mentor
- Institutional visit
- Familiarising timetable
- Content areas/ deciding units
- Preparing pedagogic analysis

- Evaluation
- Identifying, preparing TLM
- Preparing regular plan record
- Improving TM
- Conducting class
- Monitoring
- Organising club activities
- Interim evaluation
- Preparing report.

S₄P₂₂ (c) General Science - Application - Unit Details

Content	Transaction
<p>Unit 1 - Into the Science Textbook (Time 40 hours)</p> <p>1.1.Characteristics of a Science Textbook</p> <ul style="list-style-type: none"> • Ensuring basic science concepts. • Based on Psychological Principles • Activity Based • Ensuring Processes • Promoting open thinking • Child-friendly • Attractive (Language, picture, layout) • Ensuring ICT possibilities • Considering CWSN children • Containing reference indicators • Persuading continued learning • Considering regional possibilities • Based on spiralling method • Related to daily life. <p>1.2. Basic concepts of Science (Refer 1.2)</p> <p>1.3 Novel trends in Science</p> <ul style="list-style-type: none"> • 'Science Tomorrow' • Biotechnology • Space Science • Biochemistry • Information and communication Technology 	<ul style="list-style-type: none"> ■ Analysing the aims of science learning, prepare checklist and identify whether the aims of science learning are reflected in the units, lessons and parts. ■ Are the characteristics of a good science textbook observed in the UP science textbook now in use? ■ Identify the differences in the content, presentation, concept elaboration, transaction method when the same science concept is presented at different levels. ■ Compare the details of science concepts with representations like pictures, diagram, graphs etc. ■ Assess whether the activities in the textbook persuade the student to examine science concept by himself. ■ The content areas suggested in the D.Ed curriculum should be assimilated through activities like concept mapping, simple experiments, projects, observation, constructing learning material, collection, constructing garden/vegetable garden/medical plant garden • Forming the perspective 'Science Tomorrow - What?' by identifying the growth, development and new trends in the field of science. Drawing conclusion of how growth and development in the field of science influences the future of mankind. ■ Prepare presentation on the stages of growth in the fields of biotechnology, information and communication technology by conducting ICT reference. ■ Prepare publication (based on any theme) 'Science Tomorrow'. ■ How will the leap of science influence nature, mankind, living organisms etc?

Content	Transaction
<p>Unit 2 - To make Science Learning Effective (Time - 30 hours)</p> <p>2.1. Conducting Class</p> <p>Evaluation Indicators</p> <ul style="list-style-type: none"> • In depth understanding of content • Ensuring scientific method • Providing opportunity to raise questions • Making use of different possibilities for presenting problems • Presenting complex Science concepts as simple subconcepts • Developing research oriented learning techniques taking into consideration the nature, altitude, academic backwardness of students and applying them. • Developing different techniques to examine previous knowledge of children and applying them. • Leading to discovering/assimilating new knowledge by nurturing thinking skills of students. • Using the possibilities of information technology. • Preparing learning activities on the basis of multi-faceted theory. • Using practical activities and experiments appropriately • Ensuring the development of mathematical skills and numerical awareness. 	<ul style="list-style-type: none"> • Considering the theoretical basis of the curriculum and peculiarities to be had for learning activities, planning, gaining an understanding required for conducting class. ■ Preparing teaching manual for the transaction of the concepts motion, sound, atmospheric pressure, acids in class. ■ Conducting class. Evaluating using indicators. ■ What are the factors that led to the success of the class? ■ What are the factors to be further improved?

Content	Transaction
<ul style="list-style-type: none"> • Developing communication skills • Studying debatable subjects in depth and taking a stand • Investigating new science concepts constantly. • Using different methods and tools for continuous evaluation. <p>2.2. Towards excellence in teaching - Quality Indicators</p> <ul style="list-style-type: none"> • Raising Questions • Problem presentation • Using TLM • Presenting complex science concepts in a simple way • Special consideration for SEN students • Consolidation <p>2.3. Towards Planning</p> <ul style="list-style-type: none"> • Annual Planning • Unit planning (Pedagogic Analysis) • Regular Planning <p>2.4. Class Atmosphere - Characteristics</p> <ul style="list-style-type: none"> • Independent and fearless class atmosphere • Opportunity for independent communication • Exhibiting learning products and learning evidences. • Effective use of devices nurturing science learning (Science club, Bulletin board...) 	<ul style="list-style-type: none"> • Acquiring awareness about specific teaching skills to be particularly developed for making the science class more excellent, gaining application merit. ■ Teacher student transacting the concept of 'lever'. Observation team evaluating using quality indicators. <p>Discussion Indicators</p> <ul style="list-style-type: none"> ■ Were the raised questions helpful for the detailed analysis of the problem? ■ What should be taken care of to prevent the inadequacy of the concept while developing complex concepts in a simple way? ■ Prepare TM on the basis of quality indicators for excellent teaching for the concepts neutralisation and hormone. TM presentation, discussion, improving upon. • Gaining efficiency of planning by identifying the relevance and importance of different level planning for effective teaching of science. ■ Relevance and importance of planning - Seminar ■ Preparing an annual plan appropriate for transaction of the science textbook of class 7. ■ 'Class atmosphere is crucial for ensuring the academic progress of each child' - Analyse. ■ 'Learning products formed in class are learning evidence' - conduct tryout and prepare analysis report. ■ Conducting try out on selected science learning - nurturing devices. Preparing analysis report. Try outs, analysis report may be evaluated.

Content	Transaction
<p>Unit 3 - Science Class - Towards Practical Experience (Time - 40 hours)</p> <p>3.1. Unit Planning (Pedagogic Analysis)</p> <p>Structure</p> <ul style="list-style-type: none"> • Primary information • Concept Map • Analysis of the aims of the curriculum. <ul style="list-style-type: none"> - Problem - Process - Process skills - Values/Attitude - Practical Level - Creative Level • Learning activities, equipment, evaluation, time • Products and quality indicators <p>3.2. Daily Planning</p> <p>Structure</p> <ul style="list-style-type: none"> • Primary information • Objectives of Curriculum • Learning equipment • Learning problems • Evaluation • Further activities <p>3.3. Evaluation</p> <ul style="list-style-type: none"> • Continuous Evaluation • Term Evaluation • Evaluation for learning • Evaluation is learning 	<ul style="list-style-type: none"> • Gaining efficiency to prepare regular plans by conducting unit planning. ■ What are the factors to be considered for unit planning of UP Science? ■ Familiarizing TM models for different classes. ■ Developing indicators. ■ Preparing TM in common <ul style="list-style-type: none"> ■ What factors must be considered for regular planning at UP level? ■ Familiarizing TM models for different classes. ■ Developing indicators. ■ Preparing TM in common. ■ Preparing TM individually. Discussing in group. Improving • Evaluation approach record - analysis (LP environment study, UP Basic Science) Preparing assignment. (Fields, indicators, scoring, grading included)

Content	Transaction
<ul style="list-style-type: none"> • Evaluation of learning • Learning evidences - Evaluation areas • Evaluation methods • Recording • Reporting <p>3.4. Conducting Class and Evaluation</p> <p>Indicators</p> <ul style="list-style-type: none"> • Class atmosphere • Class Management • TLM arrangement and using • Following different stages of knowledge construction • Continuous evaluation 	<ul style="list-style-type: none"> ■ Identifying evaluation areas, indicators examining TM prepared by teacher students. Identifying evaluation possibilities Presentation ■ How does continuous evaluation lead the child to academic progress? ■ What is the importance of continuous evaluation in the learning process? What are the learning evidences formed? ■ Preparing evaluation equipment package on the basis of area. (Units - environment study/science) practice, using these during teaching, evaluating and recording grade. ■ Discussion (Experiences during evaluation) ■ What are the evaluation areas in Science? <ul style="list-style-type: none"> • How is it recorded? (Scoring, grading etc) • Evaluation activities are learning activities - Analyse the statement ■ Activity packages, Assignment may be considered for evaluation. <ul style="list-style-type: none"> • To gain mastery of conducting class using TM ■ What are the things to be considered for excellent Science class transaction?

Content	Transaction
<p>3.5. Class Evaluation</p> <ul style="list-style-type: none"> • Class analysis (Teacher students) <p>3.6. Internship</p> <ul style="list-style-type: none"> • Attaching with mentor • Institutional visit • Familiarizing timetable • Content areas/Deciding units <ul style="list-style-type: none"> • Pedagogic analysis preparing • Evaluation • Identifying, preparing TLM • Preparing regular plan record • Improving TM • Conducting class • Monitoring • Organizing club activities • Interim evaluation • Preparing report 	<ul style="list-style-type: none"> ■ Preparing TM individually, all teacher students to conduct class transaction ■ Class is subjected to analysis, presenting, improving. <ul style="list-style-type: none"> ▲ What are the details to be taken care of for effective classroom transaction? ▲ 'The teacher must make a self - evaluation to make each class effective' - Evaluate this statement. ▲ How can the formulation of evaluation of learning matter, activity and equipment be made possible for the academic process of SEN children?

S₄ - P₂₂ (c) General Science - Practical - Evaluation Aspects

Content	Transaction
<p>Unit 1 - Into the Science Textbooks 1.1. Science textbook characteristics 1.2. Basic concepts of Science 1.3. New trends in Science</p> <p>Unit 2 - To make Science Learning Effective 2.1. Class conducting - Evaluation indicators 2.2. To teaching excellence - Quality indicators 2.3. To Planning 2.4. Class atmosphere - Special features</p> <p>Unit 3 - Science class - To practical experience 3.1. Unit Planning 3.2. Regular Planning 3.3. Evaluation 3.4. Class conducting and evaluation 3.5. Internship</p>	<p>1.1. Textbook Analysis Report 1.2. Unit Test Project Experiments ICT Presentation 1.3. New Trends in Science - 'Science Tomorrow' publication</p> <p>2.3. Seminar 2.4 Try out Analysis Report</p> <p>3.3. Evaluation approach assignment 3.4. Evaluation activity package</p>

10.4. School Internship of Semester - 4

Of the 35 days internship in fourth semester, the first days' teaching practice should be focussed on LP section. Two periods per day for teaching practice will be more effective. Subject-wise period division is given below.

Malayalam	-	5
English	-	5
Environmental Study	-	5
Mathematics	-	5

Atleast one class for each subject should be ICT based.

The first five days of the following 25 days should be spent on UP class observation alone. The remaining 20 days should be used for teaching practice in the UP section at the rate of 2 periods a day amounting to 40 periods. Given below is the subject-period distribution.

Malayalam	-	7
English	-	7
Optional Subjects (SS/SC/Maths)	-	20
Study of Arts	-	2
Work Experience	-	2
Health - Physical Education	-	2
Total	-	40

The maximum score for the fourth semester (S4) internship is also 200. The score division for each subject, including the unit tests score, is given below.

20 scores for the community living camp and the 10 scores for the study trip are included in the total 200 scores. Score division is made considering the teaching practice at LP and UP levels.

Score Division

Subject	Score
Malayalam	- 30
English	- 30
Optional Subjects	- 60
Environmental Study	- 10
Mathematics	- 10
Study of Arts	- 10
Work Experience	- 10
Health/Physical Education	- 10
Community Living	- 20
Camp	- 10
Total	- 200

For the fourth Semester (S4) internship, out of the total 200 scores, along with the minimum C+ grade (50 - 59% Score), out of 20 for community living camp C+ grade (10 scores) and out of 10 for study trip C+ grade (5 Scores) should be attained. Only then will the internship for the fourth Semester be considered to be successfully completed.

- Student teachers must evaluate the teaching experience of each day. This is the practical training for the School Resource Group (SRG). The minutes

should be maintained. The evaluation of teachers of the institution should also be carried out. This opportunity should be used for collective planning.

- The number of classes, score details for each subject of the school internship are provided in the School Internship.
- Soon after teacher training, a report prepared shall be submitted to the Teacher Training centre. A particular Proforma may be prepared for this and given to the institution.
- Before the teacher training, Headmaster shall participate in the planning meeting and internship details shall be finalized. It will be more effective to ensure the participation of a senior teacher of the institution at the meeting.



Note

As part of preparation of D.Ed curriculum, firstly an approach paper was prepared to clarify the approach of the curriculum. The report was prepared as 'Diploma in Education (D.Ed) - "Elementary Teacher Education Curriculum Approach Paper" This paper includes teacher education in the context of Kerala, viewpoints on revision of curriculum, approaches, teacher competency, suggestions to be considered while preparing a curriculum. Refer to this paper along with the curriculum to obtain a comprehensive view on elementary teacher education. The Approach paper is available on the website www.scertkerala.govt.in

To ensure effective implementation of D.Ed Curriculum, a manual for activity has also been prepared along with the curriculum. The possibilities for activities in various subjects for each semester, method of assessment, details of internship, consolidated record of assessments etc are provided in the manual. Teacher education institutions are to examine all these papers and undertake steps to promote quality education.

Suggestions and comments related to Diploma in Education (D.Ed)- Elementary Teacher Education Curriculum are to be sent to the following address: Director, SCERT, Poojapura P.O., Trivandrum- 12, Kerala.