SEMESTER – II

Instructional hours per Subject : 90 (Theoretical Discourses – 60 & CE – 30 hours)

Perspectives in Education/Core Subjects:
EDU-06 : Education in Indian Society.
   EDU-07 : Perspectives of Learning and Teaching.
   EDU-08 : Assessment in Education.

Curriculum and Pedagogic courses/Optional subjects:
EDU-09. 1-13 : Curriculum and Resources in Digital Era: ..........Education.
   EDU-10. 1-13 : Techno-Pedagogic Content Knowledge Analysis: .................
EDU - 06: EDUCATION IN INDIAN SOCIETY

Hours to transact: 90 hrs (Theoretical Discourses – 60 & CE- 30)

Objectives

- To Develop an understanding of the evolution of education in Indian society
- To identify the role education in national development
- To recognize initiatives in modern Indian education
- To analyse the challenges in Indian education and the role of teacher in the changing scenario
- To familiarise with the emerging trends of education

Contents:

UNIT I: MILESTONES IN INDIAN EDUCATION (35hrs)
UNIT II: EDUCATION FOR ECONOMIC AND NATIONAL DEVELOPMENT (10hrs)
UNIT III: INITIATIVES IN INDIAN EDUCATION (20hrs)
UNIT IV: CHALLENGES AND TRENDS IN INDIAN EDUCATION (25 hrs)

UNIT 1: MILESTONES IN INDIAN EDUCATION (35 hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To develop an understanding of the evolution of education in Indian society</td>
<td>• Dravidian education- social structure-literature-Institutions for scholastic, recreational and legal functions- role of ‘salai’ in higher education • Vedic education-characteristics and curriculum- significance of Upanishad in maintaining world peace and sustainable development - vidya and vaidya, two pillars of a civilized society. • Buddhist education- aim of education and curriculum- • Significance of non violence and attitude</td>
<td>Historical method Integrating ICT Lecture-discussion e- learning Document analysis</td>
<td>• Role Performance Analysis in group Discussion • Involvement in Debates • Seminar Presentations • Assignments • Internal Test</td>
</tr>
<tr>
<td>2. To acquaint with existing educational policies and commissions in India</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. To understand changes of education system in Kerala</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
against materialistic life style.

- A brief account on history of Indian education during British period
- Evolution of education in Kerala (Ancient to modern period)

Reference

- Govt. of India (1992). Programme of Action (NPE). Min of HRD.
- Right to Education Act -2009
- UNESCO reports on Teacher education
- http://www.gktoday.in/rashtriya-ucchatar-shiksha-abhiyan
- UNESCO reports on Teacher education
- http://www.gktoday.in/rashtriya-ucchatar-shiksha-abhiyan
UNIT 2: EDUCATION FOR ECONOMIC AND NATIONAL DEVELOPMENT (10hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To identify the relationship between education and national development | • Social Indices of National Development  
• Education as an investment- Share of GDP to Education  
• ‘Educated unemployment’- Causes and Remedies  
• Education an instrument for intellectual property and inventions and discoveries for the welfare of the society- (IPR)- Industrial property rights- copy rights and related rights | Meaningful verbal expression  
Document analysis  
Panel Discussion  
Debates  
Seminar | • Role Performance Analysis in group Discussion  
• Extent of awareness on contemporary educational events |
| 2. To understand the role of IPR in national development | | | |

Reference
- http://knowledgecommission.gov.in/

UNIT 3: INITIATIVES IN INDIAN EDUCATION (20 hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To familiarize with the functions of state and central Apex bodies of education to familiarize constitutional goals pertaining to education | • Programmes and Schemes - DPEP, SSA, RMSA, RUSA  
• Apex bodies- CABE, NCERT, SCERT, DIET, UGC, NCTE, NAAC, NUEPA, NKC  
• Constitutional Goals - Articles of Indian Constitution Pertaining to Education – | Debates  
Lecture discussion  
Documentation and discussion | • Performance in debates  
• Seminar presentations  
• An extension activity related to the field of reference may be conducted |
Preamble.

- Article 21 A, Article 14, Article15, Article 30, Article 45, Article 46, Article 41, Article 51 A, Article 350A, Article 351
- Right to Education Act 2009

Reference


**UNIT IV: CHALLENGES AND TRENDS IN EDUCATION (25 hrs)**

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To analyze the challenges of Indian Education</td>
<td>Current Problems of Indian education – Primary- secondary- higher education</td>
<td>Brain storming</td>
<td>Analysis in group Discussion</td>
</tr>
<tr>
<td>2. To synthesis the significance of human rights education and peace education</td>
<td>Population Education – Need, Trends in Demography, Population explosion and adverse effects</td>
<td>Debates</td>
<td>Extent of awareness on contemporary educational events</td>
</tr>
<tr>
<td>3. To keep awareness on futurology of education</td>
<td>Human Rights education- Meaning and significance</td>
<td>Lecture- discussion</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Peaceful coexistence and need for peace education</td>
<td>ICT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Inclusive class room –challenges with special reference to child in need and care of protection and child in conflict law.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Futurology of education</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Reference

EDU - 07 : Perspectives of Learning and Teaching
(Theoretical Discourses – 60 & CE – 30 hours)

Objectives: To enable the student teacher to:

1. To understand the concept, nature and factors influencing learning
2. To gain an insight into the mental processes involved in learning
3. To develop an understanding of the process of learning through various theoretical perspectives
4. To familiarise the cognitive functions of learning
5. To conceptualise the basics of neuroscience
6. To understand motivation and its educational significance
7. To develop an understanding of the concept and areas of Individual difference.
8. To explain the concept and types of ‘exceptional children’.
9. To conceptualise Learning Disability and inclusive education
10. To develop skills to educate students with special needs.

Contents :

• UNIT I  NATURE OF LEARNING
• UNIT II  COGNITIVE PROCESSES IN LEARNING
• UNIT III  THEORIES OF LEARNING
• UNIT IV  INDIVIDUAL DIFFERENCES IN LEARNING

UNIT I  NATURE OF LEARNING  20 hours (15T+ 5P)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To understand the concept, nature and factors influencing learning.</td>
<td>• Meaning, Definition &amp; Characteristics of learning, Factors affecting learning - learner, Method and Task variables, Learning curve, Plateau in learning, Study habits- Concept and methods, Transfer of Learning. • Motivation- Concept, Types, strategies &amp; educational Implications, Theory of</td>
<td>Lecturing Group discussion on factors affecting learning Brainstorming on method and task</td>
<td>• Test paper • Assignments • Practicum • Presentation in seminars • Performance based assessment</td>
</tr>
</tbody>
</table>
5. To familiarise the concept of achievement motivation

<table>
<thead>
<tr>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>sensation and perception- factors, laws, concept formation, illusion</td>
<td>lectures</td>
<td>test paper</td>
</tr>
<tr>
<td>cognitive functions- thinking, reasoning, problem solving and</td>
<td>preparation of a concept map</td>
<td>performance based assessment</td>
</tr>
<tr>
<td>metacognition</td>
<td>group discussion on strategies for improving memory, reasoning and problem solving</td>
<td>practical work</td>
</tr>
<tr>
<td>memory- concept; types &amp; strategies to develop memory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>forgetting- causes and problems</td>
<td>memory test</td>
<td></td>
</tr>
<tr>
<td>cognitive neuroscience- basic concepts and relevance in learning</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Reference

UNIT III THEORIES OF LEARNING 25 hours (15T +10P)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To develop an understanding of the process of learning through various theoretical perspectives | • Behaviourist approach- Thorndike, Pavlov and Skinner.  
• Cognitive approach- Gestalt, Kurt Lewin,  
• Constructivist approach- Individual and Social- Piaget, Bruner & Vygotsky.  
• Social learning theory- Albert Bandura  
• Gagne’s hierarchy of learning.  
• Expository learning- Ausubel  
• Information processing approach to learning- Atkinson and Shiffrin | Lectures  
Critical evaluation of different approaches - Use peer tutoring technique-  
List suitable learning activities based on constructivist approach  
Cooperative and | • Performance in activities  
• Test paper  
• Group discussion  
• Assignments |
### Reference


### UNIT IV    INDIVIDUAL DIFFERENCES IN LEARNING 30 Hours (20 T+ 10P)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To develop an understanding of the concept and areas of Individual difference. | • Concept of Individual Differences - Areas of individual Differences - Interest, Attitude and Aptitude  
• Persons with disability - Types of disability – congenital, acquired, physical, mental and sub-categories: developmental delays, degenerating conditions, sensory, neural, orthopaedic, multiple disabilities.  
• Models of Education for children with special needs: Special Schools, | Lectures  
Field visits  
Institutional survey  
Identification of exceptional categories  
Design of learning | • Test paper  
• Assignments  
• Practical activities  
• Field visit reports  
• Performance assessment  
• Observation reports  
• Intervention activities  
• Practicum  |
| 2. To equip the teacher for understanding the learner in the context of their socio cultural and educational background | | | |
| 3. To familiarize the specific factors leading to individual difference. | | | |
| 4. To develop skills to educate students with special needs. | | | |
5. To familiarise inclusive education
6. To gain experiential learning in dealing special categories of students

<table>
<thead>
<tr>
<th>Integrated Education, Inclusive Education.</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Understanding the educational needs of Exceptional learners - Gifted and Slow Learners, Underachiever, Mentally Challenged, ADHD, Learning Disability-Dyslexia, Dysgraphia, Dyscalculia and Dyspraxia, Autism, Deafness, Blindness, Deaf-blindness.</td>
</tr>
<tr>
<td>• Understanding accommodations, accessibility, Assistive technology in the educational environment.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>strategies for exceptional categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seminars/Discussions</td>
</tr>
<tr>
<td>First hand experience with exceptional learners and learning disabled children</td>
</tr>
<tr>
<td>Direct experience in special schools</td>
</tr>
<tr>
<td>Screening of movies that have first hand educational experiences.</td>
</tr>
</tbody>
</table>

Reference

• Personality Classic Theories & Modern Research. New Delhi, Pearson Education
• Sindhu, I.S., (2013): Educational Psychology: India
• Umadevi, M.R.,(2009) Educational Psychology: Theories and Strategies for Learning and Instruction, Bangalore, Sathkruthi Publications

Websites
• http://www.libraries.psu.edu/
• http://www.teacher.net
• www.moodle.org
• http://teamwork.sg/teamwork/schoolportal.aspx
• http://www.enhancelearning.co.in/SitePages/Index.aspx
• http://www.e-learningforkids.org/courses.html
• http://en.wikipedia.org/wiki/Wiki
• http://www.webopedia.com/welcomead/
• http://www.filehippo.com/
• http://www.padtube.com/Windows
EDU - 08 : ASSESSMENT IN EDUCATION.
(Theoretical Discourses – 60 & CE – 30 hours)

Objectives:
The student teachers will be able to:
• Understand the concept and nature of Assessment and Evaluation in education
• Understand the role of Assessment and Evaluation in teaching-learning process
• Examine the contextual roles of different forms of assessment in schools
• Acquaint with the new evaluation practices in education
• Realize different dimensions of learning
• Familiarize with various assessment procedures, tools and techniques
• Develop an investigatory attitude through a proper understanding of the paradigms of research
• Develop the capability for research embedded instruction
• Integrate action research practices in the teaching-learning context
• Develop ability in analyzing and interpreting assessment data
• Understand the methods of finding important statistical measures and representing data using graphs

Contents
UNIT I: Perspectives on Assessment and Evaluation (25 hrs)
UNIT II: Tools and Techniques to assess Learner’s performance (20 hrs)
UNIT III: Basic Statistics for Analysis and Interpretation of Assessment data (25 hrs)
UNIT IV: Introduction to Research in Education (20 hrs)
UNIT I: Perspectives on Assessment and Evaluation (25 hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To Distinguish clearly between assessment and evaluation</td>
<td>• Assessment and Evaluation in Education - Purposes of Evaluation</td>
<td>ICT enabled group discussion, Lecture-discussion, Group Discussion</td>
<td>• Document Analysis</td>
</tr>
<tr>
<td>2. To state the purposes of evaluation and to enlist various types of evaluation</td>
<td>• Types of evaluation-Formative and Summative, Outcome Evaluation, Process Evaluation, Self Evaluation, Peer Evaluation, Product Evaluation, External Evaluation, Internal Evaluation and Objective based Evaluation.</td>
<td>Group Discussion, Meaningful verbal Expression, Collaborative interaction, Lecture and Discussion</td>
<td>• Field visit reports</td>
</tr>
<tr>
<td>3. To acquaint the students with taxonomy of instructional objectives</td>
<td>• Brief introduction to Instructional objectives as the basis of scientific evaluation-Bloom’s taxonomy of educational objectives; Domains of learning – cognitive, affective and Psycho motor.</td>
<td></td>
<td>• Class test</td>
</tr>
<tr>
<td>4. To identify the factors to be considered for successful assessment</td>
<td>• Factors to be considered for successful assessment</td>
<td></td>
<td>• Role Performance</td>
</tr>
<tr>
<td>5. To familiar with the Current practices in evaluation</td>
<td>• Current practices in assessment and evaluation –CCE- concept, need and relevance, Grading system- concept, types-absolute grading, direct grading and relative grading, merits and demerits, Grade Point Average, Cumulative Grade Point Average, Weighted average and weighted score/point. Classification of learners according to their level of performance in Grading system (By giving letter grades such as: A+, A, B+, B etc.)</td>
<td></td>
<td>• Analysis in group Discussion</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Seminar Presentations</td>
</tr>
</tbody>
</table>

ICT enabled group discussion Lecture-discussion Group Discussion
Meaningful verbal Expression
Collaborative interaction
Lecture and Discussion
**UNIT II: Tools and Techniques to assess Learner’s Performance (20 hrs)**

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To understand different techniques of assessment like interview, self-reporting and testing and their applications in the field of education.</td>
<td><strong>General Techniques of Assessment- Observation, projects, assignments, worksheets, practical work, seminars and reports, Interview, Self reporting.</strong></td>
<td>Lecture Cooperative Learning</td>
<td>• Initiation nd performance in dramatization</td>
</tr>
<tr>
<td>2. To familiarize with various tools of assessment and develops skill in applying in the field of research</td>
<td><strong>Tools of Assessment- tests, checklist, rating scale, cumulative record, questionnaire, inventory, schedule, anecdotal record-concept, merits, demerits - relevance in the field of research</strong></td>
<td>Discussion</td>
<td>• Role Performance Analysis in group Discussion</td>
</tr>
<tr>
<td>3. To understand the qualities of a good evaluation tool</td>
<td><strong>Characteristics of a good evaluation tool- validity, reliability, objectivity and practicability</strong></td>
<td>Collaborative Interaction in Debates</td>
<td>• Involvement in Debates</td>
</tr>
<tr>
<td>4. To understand Norm Referenced and Criterion referenced Evaluation</td>
<td><strong>Norm-referenced tests and Criterion-referenced tests.</strong></td>
<td>Working on online Resources Group discussion and Presentation</td>
<td>• Seminar Presentations</td>
</tr>
<tr>
<td>5. To develop the ability to construct the tools such as Diagnostic Test and Achievement Test</td>
<td><strong>Diagnostic Test and Achievement Test- Concept, Purpose and Distinction between the two tests, Steps involved in the construction of an Achievement test and Diagnostic test, Types of items-Objective type, Short answer type and Essay type, Item analysis-concept, Teacher made and Standardized Achievement tests.</strong></td>
<td>Discussion &amp; Presentation</td>
<td>• Class test</td>
</tr>
<tr>
<td>6. To familiarize with the relevance of online Examination, portfolio and rubric assessment</td>
<td><strong>Online examination/Computer based Examination, Portfolio assessment and Evaluation based on Rubrics</strong></td>
<td></td>
<td>• (Practicum-Development of any one Evaluation tool)</td>
</tr>
</tbody>
</table>
# UNIT III: Basic Statistics for Analysis and Interpretation of Assessment data (25 Hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To understand the need, importance and meaning of Statistics | • Role and importance of statistics in analyzing assessment data, Population and Sample  
• Data, Types of Data- Primary & Secondary, Quantitative & Qualitative  
• Classification of Data, Frequency Table (Grouped & Ungrouped)  
• Graphical Representation of Data- need and importance, Representing data using Bar Diagram and Pie Diagram, Histogram, Frequency Polygon, Frequency Curve and Ogives, Interpretation of graphical representations. | Narrative expression in small group  
Group Discussion  
Meaningful verbal Expression  
Active learning process, Advance organizer Approach  
Techno- lab activities & Individual assignments | • Evaluation based on documentation.  
• Role performance analysis in group discussion  
• Participant observation  
• (Practicum - on Graphical Representation of any Data) |
| 2. To familiarize the relevance of statistics in analyzing data | | | |
| 3. To understand the meaning and nature of data | | | |
| 4. To tabulate the data in a meaningful and systematic way | | | |
| 5. To appreciate the importance of the organization of data | | | |
| 6. To understand the advantages of graphical representation of data | | | |
| 7. To represent data using appropriate graphic representation and interpret accordingly | | | |
| 8. To find out different measures of central tendency | • Descriptive Statistical Measures : Measures of Central Tendency- Mean, Median, Mode-concept and methods of finding each measure and when to use each measure. Measures of Variability/Dispersion- Range, Mean Deviation, Quartile Deviation, Standard Deviation-concepts and methods of finding each measure and When to use each measure.  
• Correlation-meaning and importance, Concept of Coefficient of correlation, Types of Correlation- Positive, Negative, Zero and Perfect Correlation, Rank Difference Method of calculating Coefficient of correlation,interpretation of correlation. | Active learning Process  
Computation  
Mathematical problem solving  
Class wise discussion through Lecture.  
Presentation  
Narrative expression in small group  
Problem solving | |
| 9. To select the most appropriate measures of central tendency for the treatment of data | | | |
| 10. To find out different measures of Dispersion | | | |
| 11. To select the most appropriate measures of dispersion for the treatment of data | | | |
| 12. To familiarize with the use of correlation for data analysis | | | |
| 13. To understand the method of calculating correlation coefficient using rank difference method | | | |
## UNIT IV: Introduction to Research in Education (20 hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To understand the need and importance of research in general and educational research in particular</td>
<td>• <strong>Research</strong> - meaning, characteristics, functions of research, characteristics of a good researcher, Teacher as a researcher, need and importance of Educational research.</td>
<td>Lecture-discussion</td>
<td>• Role Performance Analysis in group Discussion</td>
</tr>
<tr>
<td>2. To realize the relevance of hypothesis formation and the skill to form different forms of hypothesis</td>
<td>• <strong>Hypothesis</strong> - meaning, relevance/role/functions, forms of hypothesis-null form, prediction form, question form and statement form</td>
<td>ICT enabled class wise discussion</td>
<td>• Class test</td>
</tr>
<tr>
<td>3. To understand the nature of different types of research and their applications</td>
<td>• <strong>Types of research</strong> (based on purpose only) - basic/fundamental research, applied research and action research.</td>
<td>Collaborative interaction</td>
<td>• Seminar Presentations</td>
</tr>
<tr>
<td>4. To familiarize with various types of research and their applications</td>
<td>• <strong>Action research</strong> - Need, scope, characteristics, Steps involved: Problem identification, Defining and Analyzing the problem, Formulating and Testing action hypotheses and Preparing the report - and Advantages and Limitations of action research, Integrating action research practices -need and scope, Preparation of Action research reports.</td>
<td>Group Discussion</td>
<td>• Analysis in group Discussion</td>
</tr>
<tr>
<td>5. To get acquainted with planning and developing of action research</td>
<td>• <strong>Research Projects</strong> – Definition of a project, Steps involved: Initiation (Providing/creating situations), Selection/Choosing, Planning/Designing, Execution, Evaluation and Recording/Reporting. Preparation of Project reports</td>
<td>Critical evaluation of need for educational research</td>
<td>• Analysis in group Discussion</td>
</tr>
<tr>
<td>6. To understand how to carry out action researches and prepare the reports</td>
<td></td>
<td>Lectures</td>
<td>• Class test</td>
</tr>
<tr>
<td>7. To familiarize with planning and developing projects</td>
<td></td>
<td>Group discussion</td>
<td></td>
</tr>
<tr>
<td>8. To understand how to carry out Projects and prepare the reports</td>
<td></td>
<td>Meaningful verbal Discourse</td>
<td></td>
</tr>
</tbody>
</table>

**Reference**

• Lindquist, E. F. (1963), *Design and Analysis of Experiments in Psychology and Education*.
• Zubizarreta, John .(2009).The Learning Portfolio: Reflective Practice for Improving Student Learning. USA: Johnwilley and Sons. Inc
• www.springer.com/education+%26+language/journal/11092
• www.researchphilosophy.blogspot.com/
• www.katho3.people.wm.edu/
• www.adprima.com/measurement.htm
• www.cmu.edu/teaching/design/teach/rubrics.html.
EDU – 09.1: Curriculum and Resources in Digital Era : Malayalam Education.

(theoretical Discourses – 60 hours & CE – 30 Hours)

Objectives:
- To get acquainted with principles/concepts of curriculum construction, different types of curriculum.
- To get acquainted with National/Kerala curriculum framework,
- different types of curriculum etc.
- To understand concepts related community based teaching and learning
- To incorporate e- resources in the pedagogic content knowledge analysis of Malayalam
- To understand the basic theories/concepts/perspectives of language acquisition, Chomsky’s conceptions on language, the whole language approach etc.

Contents:
- Unit – 1: Curriculum Design in Malayalam Education.
- Unit -2: Community Based Teaching and Learning of- Malayalam.
- Unit – 3: E-Resources in Teaching & Learning of – Malayalam -
- Unit – 4: Research Inputs Malayalam Learning -
- Unit – 5: Researches in language and Language Learning -

Unit 1: Curriculum Design in Malayalam Education

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To get acquainted with principles/concepts of curriculum construction, National/Kerala curriculum framework, different types of curriculum etc. | • Principles of curriculum construction  
• Curriculum and Syllabus  
• General Approach on language learning in National/Kerala curriculum framework  
• Different concepts in curriculum construction: Activity oriented, Issue based, Problem based curricula. | Open discussion on the suitability of present day school curriculum  
Preparation of an essay on general approach on language learning in | • Participation in discussion/Relevance of ideas  
• Essay |
## Unit 2 Community Based Teaching and Learning of Malayalam

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To understand concepts related community based teaching and learning | • Library – as a community resource centre  
• Importance - Different types School/Class/Subject libraries – ways for effective organization.  
• Importance of agencies like Kerala Sahitya Academi, Kerala Bhasha Institute etc.  
• Major Malayalam Book stores and publishers - DC Books, NBS, Mathrubhoomi etc.  
• Local text  
• Co operative and collaborative learning/teaching  
• Language labs | Assignments  
Preparation of short notes  
Seminar presentations  
Design and development of language lab activities | • Assignment papers  
• Appropriateness of presentations  
• Variety and suitability |
### Unit 3 E-Resources in Teaching & Learning of - Malayalam

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To get familiarized with the e-resources for teaching/learning Malayalam | • Applications for writing Malayalam - Google input tool etc.  
• Commercial typing software for Malayalam: ISM, iLEAp etc.  
• Design and development of Malayalam blogs.  
• Major useful sites for teaching and learning Malayalam.  
• Use of Social Networking sites in teaching and learning Malayalam language and literature  
• E-resources for teaching and learning Prose, Poetry and Grammar | Familiarisation session on applications/software/sites suitable for Malayalam teaching and learning  
Design and development of a blog for Malayalam class  
(group activity)  
Practicum | • Participation of students' innovative ideas  
• Comprehensiveness |

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. To incorporate e-resources in the pedagogic content knowledge analysis of Malayalam</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Unit 4 Research Inputs Malayalam Learning

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To understand the basic theories/concepts/perspectives of language acquisition, Chomsky’s conceptions on language, the whole language approach etc. | • Recent researches in Malayalam Language and Literature  
• Action Research  
• Researches in language and Language Learning – New Perspectives  
• Language a biological triggered behavior  
• Language acquisition vs. Language learning. | Seminar on conventional and new perspectives in learning language  
Preparation of short notes on LAD, | • Seminar paper/participation  
• Correctness of notes  
• Student participation |
<table>
<thead>
<tr>
<th><strong>Language acquisition and cognitive development</strong></th>
<th><strong>The parameters of LAD and Universal Grammar</strong></th>
<th><strong>Chomsky on Language and thought</strong></th>
<th><strong>The whole Language Approach</strong></th>
<th><strong>universal Grammar</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion on supplied reading materials.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Reference**
- Anveshanangalkkuorukaippusthakam;
**EDU- 10.1 : Techno Pedagogic Content Knowledge Analysis-Malayalam.**

*(Theoretical Discourses – 60 hours & CE – 30 hours)*

**Objectives:**
- To get familiarized with TPCK and Personalised instructional strategies
- To get acquainted with the concept ‘teacher as a techno pedagogue’
- To get familiarized with the concepts of networking in Malayalam Learning
- To understand concept of ‘models of teaching’ and to practice various models
- To get familiarized with the new global trends in Malayalam education.

**Contents:**

Unit – 1: TPCK and Self Instructional Strategies (Teacher as a Techno-Pedagogue) - Personalised Instruction
Unit – 2: Networking in Malayalam Learning.
Unit – 3: Models of Teaching.
Unit – 4: Global Trends in Malayalam Education.

---

**Unit 1 TPCK and Self Instructional Strategies (Teacher as a Techno-Pedagogue)**

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To get familiarized with TPCK and Personalised instructional strategies | • Techno Pedagogic Content Knowledge Analysis  
• Effective use of technology in the transaction of content  
• Personalised Instruction  
• Programmed Instruction: Linear, Branched  
• Instructional Modules  
• Computer Assisted Instruction - CAI,  
• Computer Managed Instruction-CMI | Discussion on reading materials given.  
Preparation of modules  
Workshop for the familiarization of CAI, CMI | • Participation  
• Completeness and clarity  
• Involvement in the workshop  
• CE - Test |
## Unit 2 Networking in Malayalam Learning

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To get acquainted with the concepts of networking in Malayalam Learning      | • Major Malayalam blogs, facebook pages etc. for Malayalam Teaching and Learning  
• Community extension activities  
• Use of Malayalam Wikipedia- content generation.  
• Use of Social networking sites in developing academic networks among teacher and students.  
• Uses of YouTube                                                                 | Active participation of students  
Opportunity to contribute innovative ideas  
Practical sessions based on blogs and other networking sources           | • Participation  
• Innovative ideas and suggestions  
• Relating to the content- different ways practiced  
• CE - Practicals (Two items)                                                  |

## Unit 3 Models of Teaching

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To understand concept of ‘models of teaching’ and to practice various models  | • Basic concepts  
• Concept attainment model.  
• Synectics Model  
• Role Play Model  
• Advance Organiser                                                               | Preparation of lesson plans based on models of teaching  
Demonstrations on models of teaching  
Practice sessions based on models                                               | • Lesson plans  
• Performance of the students  
• CE - Subject Associated Activities                                             |
## Unit 4: Global Trends in Malayalam Education

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To get familiarized with the new global trends in Malayalam education.</td>
<td>• Global advancement of web Malayalam&lt;br&gt; • Online Libraries&lt;br&gt; • Online periodicals&lt;br&gt; • Online publications&lt;br&gt; • Mass Media</td>
<td>Familiarisation online publications&lt;br&gt; Discussion about online periodicals/publications.&lt;br&gt; Preparation of a list of online libraries&lt;br&gt; Assignment/ Debate on mass media</td>
<td>• Performance of the students&lt;br&gt; • Discussions&lt;br&gt; • Assignment paper/Participation and performance in debates</td>
</tr>
</tbody>
</table>

### Reference

- Prof. MK Prasad<br>- Bhashapadanavum Bhodhana shastra varum<br>- Dr. SreeVrinda Nair N<br>- Divaswapna<br>- GijubhaiBhadeka<br>- EnganeMalayalattilBlogam<br>- Baburaj PM<br>- Gadyarachana<br>- Dr. CK Chandrasekharan Nair<br>- Gadyashilpam<br>- CV VasudevaBhattathiri<br>- Kerala Panineeyum<br>- AR RajarajaVarma<br>- Kut tikalePadanathilSahayikkam<br>- PK Abdul Hammed Karassery<br>- MalayalaBhashaBodhanam<br>- CV VasudevaBhattathiri<br>- MalayalaBhashadyapanam<br>- Dr. KSivarajan<br>- MalayalaKavithapadhanamngal<br>- K Sachidanandan<br>- MalayalaSahithyaCharithram<br>- Dr. KalpattaBlakrishnan<br>- MalayalaSahithyaCharithram<br>- PK Parameswaran Nair<br>- MalayalaSahithyaNiroopanam<br>- Dr. PanmanaRamachandran Nair

Kerala Shaasthrasaahitya Parishad<br> DC Books Kottayam<br> DC Books Kottayam<br> National Book Trust<br> DC Books, Kottayam<br> Kerala Bhasha Institute<br> Kerala Bhasha Institute<br> DC Books, Kottayam<br> Kerala Bhasha Institute<br> Calicut University<br> Mathrubhoomi Books<br> Kerala Bhasha Institute

Current Books, Kottayam
MalayalaSahithyaVimarshanam: Dr. Sukumar Azheekkode DC Books, Kottayam
Mathrubhashabhodhanam: Allen, D & Ryan, K Adison Wesley, London
MumbilullaJeevitham: J Krishnamoorthi DC Books, Kottayam
Nalla Malayalam: CV VasudevaBhattathiri DC Books, Kottayam
NammudeBhasha: EMS Namboothiripad Kerala Bhasha Institute
Padyapadhati sidhaantham: Dr. Ravisankhar S. Nair Kerala Bhasha Institute
ParivarthanonnughaVidhyabhabyasamGuru NithyaachaitanyaYathi NarayanaGurukulam, Varkala
PravanathakalumReethikalum: Bindhu, C.M Scorpio, Calicut
PrayogikaVyakaranam: Irinjayam Ravi Kerala ShaasthrasaahityaParishad
PurogamanaVidyabhyaasachinthakal: PV Purushothaman DC Books, Kottayam
Thettiilatta Malayalam: Prof. PanmanaRamachandran Nair Current Books, Kottayam
TirakkadhaRachana – KalayumSidhanthvum: Jose K Manuel National Book Trust, Kerala
Toto Chan: TetsukoKoriyoNagi
ShaasthrasaahityaParishad: Tuition to Intuition Dr. KN Anandan Transcend, Malappuram
Ucharanamnannavan: Dr. VRRabodhachandran Kerala Bhasha Institute
VidhyabhayasathiViplavam: Osho Silence, Kozhikode
Vidyabhyaasachinthakal: AsisTharuvana Olive, Kozhikode
VidyabhysaParivarthanattinoruAmugham: Kerala ShaasthrasaahityaParishad
VyakaranaMitham: SheshsagiriPrabhu

Online Resources
http://ml.wikipedia.org
https://www.facebook.com/groups/144983732246185
https://www.facebook.com/groups/paribhasha
http://www.keralasahithyaakademi.org/
http://malayalambloghelp.blogspot.com/
http://www.topsite.com/best/malayalam
http://malayalam.kerala.gov.in/index.php
http://malayalaakyavedi.blogspot.in/2015/04/blog-post_61.html
http://bloghelpline.cyberjalakam.com/
http://blogsaahayi.blogspot.in/
EDU - 09.2: Curriculum and Resources in Digital Era: English Education.

(Theoretical Discourses – 60 & CE – 30 hours )

Objectives:
• To familiarize with concepts related to Curriculum and Syllabus.
• To develop an understanding of the need and scope of school-community linkage.
• To identify and critique different types of Course Books.
• To explore possibilities of collaborative and cooperative learning.
• To sensitize with ways of engaging classes in inclusive settings.
• To evoke a need to regularly update research in the field of ELT

Contents:
Unit I: Curriculum Designing in English Education
Unit II: Community Based Teaching and Learning of English
Unit III: E-Resources in Teaching & Learning of English
Unit IV: Research Inputs in English Learning

Unit I: Curriculum Designing in English Education (Duration : 25 hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. Familiarize student teacher with the principles of curriculum construction and organization | • Principles of Curriculum construction and organization  
• NCF 2005, 2009, KCF 2007  
• Critical Pedagogy  
• Issue-based curriculum  
• Social constructivism  
• Curriculum and Syllabus, Curriculum-Types  
• Language Curriculum  
• Philosophical and Sociological | Direct instruction  
Intro talk on the different Frame work available  
Verbal interaction  
Preparation of Check list and group | • Evaluation of entry made in ReflectiveJournal |
| 2. Grasp the relationship between curriculum and Syllabus | | | |
perspectives, Psychological and Linguistic Foundations
- Criteria for Selection of content
- Course book, Sourcebook

### Unit II: Community Based Teaching and Learning of English (Duration :20 hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. Acquaint with teaching and learning resources available in formal and informal contexts | - Teaching and learning resources  
- Formal & Informal learning contexts  
- Role of Language Institutes and Local Library for learning English  
- Society as Language Lab – FilmTheatre  
- Literary clubs, Language forums  
- Interview and Talk by experts  
- Exposure to events of national importance  
- Inclusive Education- Concept, Need and significance; Ways of dealing with learners with LD/ Children with Special needs | Field visit  
Hands-on experience  
Group discussion  
Sharing of learning experience | - Surveying  
- Checklist  
- Presentation of Field visit reports |
### Unit III: E-Resources in Teaching & Learning of English (Duration: 25 hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To analyze instructional materials in print and digital form for effective transaction | • Educational Websites  
• Virtual Classrooms  
• On line language games- vocabulary, grammar, spelling etc.  
• E-Library  
• E-resources for Prose  
• Film adaptations - literature and social issues  
• Audio podcasts  
• Speeches  
• Pronunciation and Conversation practice Online  
• E-resources for Poems  
• Critique of poems on websites  
• Exploring text types Online  
• Descriptive – Narrative- Expository- Argumentative  
• Recitation | Presentation of specimen digital resources followed by critique on effectiveness  
Individual /Pair work  
Exploring online resources and preparing report | • Performance evaluation  
• Participant observation |

### Unit IV: Research Inputs in English Learning (Duration: 20 hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To enable student teachers to promote student effort in learning | • Research in English Language Education and Second Language Pedagogy  
• Identifying and locating significant concerns related to language learning | Intro lecture  
Enquiry centred discussion | • Style of presentation  
• Performance  
• Examine communicative competence |
### Reference

**Books:**

**Journals:**
- Interdisciplinary Strategies for English and Social Studies. [Link](http://apcentral.collegeboard.com/apc/public/repository/ap04_preap_l_inter_st_35891.pdf)

**Select Online resources:**
- Characteristics of a virtual classroom [Link](http://www.learndash.com/characteristics-of-a-virtual-classroom/)
- Curriculum
  - [Link](http://www.preservearticles.com/2012010920286/the-main-principles-of-curriculum-construction-may-be-mentioned-as-under.html)
  - [Link](http://www.differencebetween.info/difference-between-syllabus-and-curriculum)
- How to Critique Poetry
  - [Link](http://www.wikihow.com/Critique-Poetry)
  - [Link](http://www.writingroom.com/viewwriting/wr_how_to/How-To-Critique-A-Poem)
  - Four Types of Writing: [Link](http://hunbbel-meer.hubpages.com/hub/Four-Types-of-Writing)
  - Free-ENGLISH.com: [Link](http://www.free-english.com/english/Home.aspx)
Film adaptations
- Adaptation - novel to film: http://www.pbs.org/wgbh/masterpiece/learningresources/fic_adaptation.html
- Adaptation: From novel to film: http://d2buyft38glmwk.cloudfront.net/media/cms_page_media/11/FITC_Adaptation_1.pdf
- Masterpiece theatre: http://www.pbs.org/wgbh/masterpiece/learningresources/fic_about.html
- Inclusive education: http://nvpie.org/inclusive.html
- Internet TESL Journal, Thehttp://iteslj.org/

Language forums
- http://www.usingenglish.com/forum/

Online Language Games
- Games zone: http://www.english-online.org.uk/games/gamezone2.htm
- Vocabulary games: http://www.vocabulary.co.il/

Mobile learning
- A beginner’s guide to mobile learning in ELT: http://englishagenda.britishcouncil.org/seminars/beginners-guide-mobile-learning-elt
- English Conversation Exercise - Trip to FL - American English Pronunciation: https://www.youtube.com/watch?v=4ogrBNpHPos

Pronunciation practice online
- 14 English pronunciation practice - ESL Spoken English lessons - Pronunciation common mistakes: https://www.youtube.com/watch?v=Xm2RIcGEVPw
- Pronunciation
- English Speaking Online: http://www.englishspeakingonline.com/
- Pronunciation tips: http://www.bbc.co.uk/worldservice/learningenglish/grammar/pron/
- Speaking & Pronunciation Practice: http://esl-writingtutor.com/practice/speaking-pronunciation.html

Podcasts
- Speaking skills for advanced learners of English: http://splendidsspeaking.podomatic.com/
- The English we speak: http://www.bbc.co.uk/podcasts/series/tae
- Listen to English: http://www.listen-to-english.com/

ELT Research
- Action research: https://www.teachingenglish.org.uk/article/action-research
- Directory of UK ELT Research 2005-12: https://www.teachingenglish.org.uk/elt-research
• Online research: http://tewt.org/index.php/research
• Tips on Reciting: http://www.poetryoutloud.org/poems-and-performance/tips-on-reciting

Useful sites
• Cambridge ELT: http://uk.cambridge.org/elt/
• CILT (Centre for Information on Language Teaching and Research): http://www.cilt.org.uk/infos/index.htm

e-Library
• Hathi Trust’s digital library: http://www.hathitrust.org/
• Open eBooks Directory: http://e-library.net/
• ProQuest eLibrary: http://www.proquest.com/products-services/elibrary.html

E-Resources for prose
• e-Resources for poem: http://www.poetryfoundation.org/learning/resources
• Resources for English and American Literature: http://www.lib.cam.ac.uk/eresources/subjectresources.php?subjectId=36
• Education sites: http://www.topedusites.com/
• ESLflow: http://www.eslflow.com/
• Learn English Central (British Council): http://www.learnenglish.org.uk/
• One Stop English Magazine: http://www.onestopenglish.com/
• TEFL.NET: http://www.tefl.net/index.html
EDU - 10.2: Techno Pedagogic Content Knowledge Analysis: English

HOURS OF INTERACTIONS: 60 (Instructions) + 30 (Activities/Processes) = 90 Hrs

Objectives
• To familiarize with concept of teacher as a Techno-pedagogue.
• Identity ways of networking both for knowledge enrichment and instruction.
• Familiarize with the scope and possibilities of Models of teaching as an instructional design.
• Develops an awareness of global trends in English Language education.

Contents
Unit I: TPCK and Self Instructional Strategies (Duration : 25 hrs)
Unit II: Networking in language learning (Duration : 20 hrs)
Unit III: Models of Teaching in Language Practice (Duration : 25 hrs)
Unit IV: Global Trends in English Language Education (Duration : 20 hrs)

Unit I: TPCK and Self Instructional Strategies (Duration : 25 hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Familiarizes with the concept of teacher as Techno-pedagogue</td>
<td>• Techno-Pedagogy</td>
<td>Comparison of same content available in different digital formats</td>
<td>• Preparation of computer-based instructional material</td>
</tr>
<tr>
<td>2. Identifies the inter-relationship between Content Knowledge, Pedagogic Knowledge and Technological Knowledge</td>
<td>• Content Knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Pedagogic Knowledge</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Technology Knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Teacher as a Techno-Pedagogue</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Nature and scope of Self Instructional Strategies</td>
<td></td>
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<tr>
<td></td>
<td>• Programmed Instruction - Linear-Branching</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>• Self Instructional modules</td>
<td></td>
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<tr>
<td></td>
<td>• Computer Assisted Instruction (CAI)</td>
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<tr>
<td></td>
<td>• Computer Based Instruction (CBI)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Computer Assisted Language Learning (CALL)</td>
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</tr>
</tbody>
</table>
Unit II: Networking in language learning  (Duration :20 hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. Familiarizes with ways of exploiting Internet resources for both knowledge enrichment and instruction | • Networking;  
• Teacher –Teacher; Teacher-Institution; Teacher-Student  
• Forum, Wiki, Blog  
• Video Conferencing  
• Professional communities -English Teacher Blogs  
• Teacher Tube  
• ESL Café  
• LinkedIn  
• Content writing  
• Copy Writing  
• Outsourcing  
• Transcription  
• Learning Management System  
• Scope  
• Storage  
• Collaboration | Introductory talk  
Demo in Smart Classroom  
Pair-share  
Collaborative tasks | • Group presentation  
• Monitoring of activities in virtual world  
• Checking Popularity on Web |
### Unit III: Models of Teaching in Language Practice (Duration : 25 hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Familiarizes with Models of Teaching as an instructional design and identifies ways of employing them for teaching Prose, Poetry, Vocabulary and Grammar</td>
<td>• <em>Dimensions of a Model- Syntax, Social System, Principles of Reaction, Support System</em> Instructional and nurturant effects&lt;br&gt;• -Direct Instruction Model&lt;br&gt;• -Concept Attainment Model&lt;br&gt;• -Advance Organizer Model&lt;br&gt;• -Synectics Model&lt;br&gt;• -Role Play Model</td>
<td>Distribution of Specimen Lessons based on specific Models&lt;br&gt;Group tasks for preparing lessons based on specific Models&lt;br&gt;Assimilation and accommodation</td>
<td>• Ability to transact the content/realize objectives in the plans prepared&lt;br&gt;• Checking effectiveness of Lesson Plans based on specific Models&lt;br&gt;• Models for chosen content</td>
</tr>
</tbody>
</table>

### Unit IV: Global Trends in English Language Education (Duration : 20 hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Familiarizes with global trends in Language education&lt;br&gt;2. Familiarizes with aspects related to translation&lt;br&gt;3. Gets an awareness of digital resources for Online tutoring</td>
<td>• Exercises and pedagogic practices in countries where English is treated as L₁&lt;br&gt;• Exercises and pedagogic practices in Asian countries as ESL&lt;br&gt;• Literary Translation as an exercise-poetry, fiction, prose, world classics from India, translation from Malayalam Literature, critical essays etc.&lt;br&gt;• Journal Clubs – Review and discussion of studies and articles in Journals</td>
<td>Lecture-cum-discussion on different pedagogical practices.&lt;br&gt;Close reading of literary texts followed by group translation</td>
<td>• Prepares samples&lt;br&gt;• Peer evaluation&lt;br&gt;• Performance in tests</td>
</tr>
<tr>
<td>Production of digital resources for Online tutoring</td>
<td>Comparison of articles in journals and magazines to identify form and style required for journal articles followed by critique of articles written by peers</td>
<td>Critique of specimen digital resources followed by design and preparation of digital resources for Online tutoring</td>
<td></td>
</tr>
</tbody>
</table>

References

Books:
- Lesley, Farrel (et al.) *English Language Education in South Asia: From Policy to Pedagogy*. Cambridge University Press.

Journals:

Online references:
- *CALL* (computer assisted language learning): https://www.llas.ac.uk/resources/gpg/61


• **Educational Blogging:** http://tewt.org/index.php/discussion-collaboration/blogs

• **E-tivities with a Wiki: Innovative Teaching of English as a Foreign Language:** http://eunis.dk/papers/p87.pdf

• **How to Write and Publish an Academic Research Paper:** http://www.journalprep.com/FILES/How_to_Write_and_Publish_an_Academic_Research_Paper.pdf

**Online reading material**

• http://www.gutenberg.org/wiki/Main_Page

• http://onlinebooks.library.upenn.edu/archives.html

**Online tutoring platforms**

• https://buddyschool.com/

• http://www.tutorvista.co.in/index.php

• https://www.smarthinking.com/services-and-subjects/services/live-online-tutoring/

**Quick guide to LMS:** http://edudemic.com/2012/10/a-quick-guide-to-learning-management-systems/

• **Rubrics for Web Lessons:** http://webquest.sdsu.edu/rubrics/weblessons.htm

• **Select Podcasting Sites:** English as a Second Language Podcast: http://www.eslpod.com

• **Specimen Linear Programme for teaching Grammar:** http://programmedinstruction.tiddlyspot.com/#Nouns-17

• **Teaching English in the Digital Age:** http://digitalenglish.weebly.com/

• **Translation activities in the language classroom:** https://www.teachingenglish.org.uk/article/translation-activities-language-classroom

• **Using computers in language teaching:** http://esl.fis.edu/teachers/support/teach.htm


• **Writing a journal article review:** https://academicskills.anu.edu.au/resources/handouts/writing-journal-article-review

EDU - 09.3. : CURRICULUM AND RESOURCES IN DIGITAL ERA: HINDI EDUCATION

HOURS OF INTERACTIONS: 60 (Theoretical Discourses) + 30(Activity Processes) = 90 Hrs

Objectives
- To be conversant with modern principles and trends in the construction and transaction of Hindi curriculum
- To develop experience to systematically correlate instructional practices with the community
- To attain proficiency in transacting the Hindi curriculum from a digital migrant outlook
- To generate a broad perspectives of e-resources in instructional practices and to develop skill in retrieving and transacting Hindi curriculum through e-resources
- To develop a positive attitude towards research to develop inquiry skills and scientific investigation

CONTENTS:
Unit 1 Curriculum Designing in Hindi Education
Unit 2 School and Community Based Instructional Resources in Teaching Hindi
Unit 3 E-Resources in Teaching and Learning of Hindi
Unit 4 Research Trends in Hindi Education

Unit 1: Curriculum Designing in Hindi Education (16 Hours + 7 Hours)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. Get acquaint with the modern principles and trends in curriculum construction and designing of instructional materials for curriculum transaction | - Curriculum – Concepts and principles of curriculum construction  
- Approaches, types of curriculum  
- Curriculum and Syllabus.  
- Preparation and designing of curriculum transaction material for Hindi language instruction: Designing of student-teacher generated Digital texts, adapting free downloadable digital resource in Hindi, Familiarising with the use of basic tools and software in Hindi -Google transliteration (for Hindi typing), Hindi online dictionaries – | Analytical approach  
Seminar  
Lecture  
Co-operative learning  
Workshop  
Library works  
Utilisation of web resources | - Group investigation summary reports  
- Authenticating the trustworthiness of the networking resources – by peers and mentor |
### Unit 2: School and Community Based Instructional Resources in Teaching Hindi (18 Hrs + 7 Hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Develop a desire to take active involvement in social and community affairs and develop skills in public relation</td>
<td>• School and community based instructional resources, school to the community and community to the school, social and community involvement activities</td>
<td>Discussion Field visit Hands-on experience Project method Visit to institutions</td>
<td>• Prepare a list of community resources - discuss and present the ways to utilize the community resources</td>
</tr>
<tr>
<td>2. Acquaint with teaching and learning resources available in formal and informal contexts</td>
<td>• Formal and Informal learning contexts • Role of PTA, MPTA • Society as language lab: Film, Theatre • Field visit, visit to central Govt institutions, interaction with native Hindi speakers, visiting institutions that promote Hindi language namely Kerala Hindi Prachar Sabha, Dakshin Bharat Hindi Prachar Sabha, Regional Hindi Directorates etc., visit to SCERT, NCERT • Organizing co-curricular activities: language forums, Hindi literary clubs and day celebrations • Need and importance of library in Hindi education, developing library skills</td>
<td></td>
<td>• Report on field study • Surveying</td>
</tr>
<tr>
<td>3. Equip to systematically correlate instructional practices with the society</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Unit 3: E-Resources in Teaching and Learning of Hindi (12 Hrs + 8 Hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. Analyze Hindie-resources in instructional practices | • E-resources: utilization of e- resources, web resources, need for Hindi e-resource pooling and development of e-portfolio, M-learning as a pervasive method for effective Hindi instruction, e-learning, web based learning.  
• Learning management system (LMS) in teaching learning of Hindi education—Familiarize with transliteration software for Hindi typing and editing, Formation of Hindi Net groups/online communities, e-content in Hindi for enhancing students language attainment- social networking, developing Blogs and posts in blogs, e-journals, pod casting, IT enabled instructional resources: On line resources, videos, YouTube resources, animations, film clippings, online Hindi lessons (HINDI PAAD) | Online learning  
Demonstration  
Individual/ group work  
Web search | • Assessing the preparation of e-learning material  
• Preparing report on online resources |
| 2. Familiarize with on- line resources, softwares and social networking | | | |
| 3. Explore and practice infotainment activities in language | | | |

### Unit 4 Research Trends in Hindi Education (14 Hrs+ 8 Hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. Grasp the need and scope of research in Hindi instruction | • An introduction to Research in Education- Need and scope of research in teaching-learning Hindi, need for developing innovative techniques and strategies | Group Discussion  
Prepare a note/paper (utilizing internet) on the latest research findings on | • Evaluation of seminar presentation skill  
• Performance assessment  
• Examine communicative competence |
| 2. Develop research aptitude, and inquiry skills | | | |

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<table>
<thead>
<tr>
<th>Hindi teacher as a researcher</th>
<th>Analysis of Research outcomes in Hindi education with respect to teaching and learning</th>
<th>Action Research Project</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>pedagogical aspects in Hindi</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Group Seminar</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Action Research Project</td>
<td></td>
</tr>
</tbody>
</table>
EDU- 10.3 : TECHNO PEDAGOGIC CONTENT KNOWLEDGE ANALYSIS – HINDI

HOURS OF INTERACTIONS: 60(Theoretical Discourses) + 30 (Activities/Processes) = 90 Hrs

Objectives
• To prepare the prospective teachers to be techno-pedagogue and become aware of the concept TPCK
• To develop the skill of inculcating technology assisted Hindi learning
• To familiarize with the networking system for institutional and professional growth
• To empower in surfing digital resources for Hindi instruction
• To get acquainted with the importance of learning Hindi in a global perspective.

Contents :
Unit 1  Techno Pedagogic Content Knowledge Analysis (TPCK) and Self Instructional Strategies
Unit 2 Networking in Hindi Learning
Unit 3 Models of Teaching in Hindi
Unit 4 Global Trends in Education

Unit 1    Techno Pedagogic Content Knowledge Analysis (TPCK) and Self Instructional Strategies (18 Hrs+7 Hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. Acquire the concept of teacher as techno-pedagogue and become aware of the concept TPCK | • Inter relationship between Technology, Pedagogy and Content, Teacher as Techno-Pedagogue  
• Scope of Techno-Pedagogic Content Knowledge Analysis  
• TPCK based content analysis of text books in Hindi from std V11 to X11  
• Creating technology enhanced learning environment, 21st century skills  
• Collections of links to websites in Hindi, e-Newspapers and e-journals | TPK based content analysis through peer discussion and teacher intervention  
Demonstration  
On line and off line learning  
Group discussion | • Prepare a self explanatory note on ‘Teacher as a Techno-Pedagogue’  
• Document analysis |
• Self instructional strategies: Digital portfolio, online collaboration, use of multimedia, web portal, e-learning, technology integrated Problem Solving Learning, Computer Assisted Learning Packages, preparation of self instructional modules, creation of e-mail ID and blogs, preparation of PowerPoint presentations
• Internet as a research and communication tool, using search engines, chat rooms, blogs to encourage peer interaction / expert consultation / collaborative projects

### Unit 2  Networking in Hindi Learning (12 Hrs+ 6 Hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. Develop the ability to acquaint with the various modes of networking for effective language instruction | • Professional and Institutional growth: student and institution networking  
• e-twinning  
• Collaboration with any institution’s online portal for institutional and professional growth  
• Online learning: concept and system of online learning, virtual learning, creating social online groups for promoting teaching-learning of Hindi, Hindi language translation sites and softwares-Translation Buddy.com/Hindi  
• Applications of Social Networking systems, online reflection using blogs, online forums and Hindi communities, communication | Utilising e-learning resources  
Virtual tour to digital learning platforms  
Downloading / pooling competency enhancement packages/ resources  
Workshop  
Postings in blogs | • Performance assessment and feedback  
• Evaluation of Online Assignments |
sites, preparation of online notes
- Awareness of student safety on the Internet, Copyright Issues and International Copyright laws regarding computer technology and Internet

### Unit 3 Models of Teaching (14 Hrs + 9 Hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. Familiarizes with different types of Models of Teaching as an instructional design | • Models of Teaching – Introduction and definition, dimensions of a model, classification of models, types and families  
• Designing of effective Models for Hindi language learning – Concept Attainment Model, Role-Play Model, Inductive – Deductive Thinking Model, Advance Organizer Model, Synectics Model – theory and classroom practices, preparation of lesson templates for each model | Demonstration of models of teaching  
Preparation of lessons based on models of teaching  
Simulation | • Experience sharing  
• Assessment of lesson plans  
• using different models of teaching  
• Peer assessment  
• Examine the level of participation |

### Unit 4 Global Trends in Hindi Education (16 Hrs + 8 Hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. Familiarizes with global trends in language education  
2. Analyze the scope of Hindi language in the global context | • Importance of Hindi as link language in the global context  
• Hindi education and job opportunities in the global context  
• Global trends in Hindi education  
• Hindi language education in India and Gulf countries | • Discussion  
• Brain storming  
• Problem solving  
• Concept maps  
• Online learning  
• Assignment  
• Report | • Presentation  
• Assessment of assignment/report |
EDU - 09.4: CURRICULUM AND RESOURCES IN DIGITAL ERA: SANSKRIT EDUCATION.

[THEORETICAL DISCOURSES - 60HOURS+ CE -30HOURS]

OBJECTIVES:
- To understand and analyse the curriculum and text books of Sanskrit from std 7-12 prepared by SCERT based on the theoretical principles of curriculum construction.
- To identify and to understand the Community based teaching learning resources in Sanskrit.
- To familiarize and practice e-resources in teaching and learning of Sanskrit.
- To conduct action researches based on classroom practices.

CONTENTS:
UNIT I - CURRICULUM DESIGNING IN SANSKRIT EDUCATION
UNIT II - COMMUNITY BASED TEACHING AND LEARNING OF SANSKRIT
UNIT III - E- RESOURCES IN TEACHING AND LEARNING OF SANSKRIT
UNIT IV - RESEARCH INPUT IN SANSKRIT LEARNING

Unit-1 curriculum designing in Sanskrit education[15HOURS+6HOURS]

<table>
<thead>
<tr>
<th>Learning Outcome</th>
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<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Outcome</td>
<td>Major concepts</td>
<td>Strategies &amp; Approaches</td>
<td>Assessment</td>
</tr>
<tr>
<td>------------------</td>
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<td>-------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>1. To identify and to understand the Community based teaching learning resources in Sanskrit.</td>
<td>• Teaching and Learning resources. School, Library, Literary clubs, Language lab, Community-Formal and Informal Learning. Role of Language Institutes and Local Library for Learning Sanskrit. Society as Language Lab. –Film Theatre-Language Forums-Interview and talks by experts. Exposure to events of national importance. Samskritotsava-Sanskrit day</td>
<td>Discussion. School induction programme.</td>
<td>• Role performance. • Based on report and participant observation. • Participant observation. • Analysis and mapping. • Observation. • Analysis the group discussion. • Participant observation. • Practicum-10 Marks.</td>
</tr>
</tbody>
</table>
celebrations-Observation of kalidasa and vyasa jayanthi. Visit to various historical places and importance of sanskrit - archeology museum, mural paintings, Sanskrit universities, kalamandalam, panmana asramam, Rashtreeya sanskrita samstan puranattukara etc. Inclusive Education-Concept, Need and Significance, Ways of dealing with learners with LD/Children with special needs.

<table>
<thead>
<tr>
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</tr>
</thead>
</table>

UNIT-III-E-RESOURCES IN TEACHING AND LEARNING OF SANSKRIT[18HOURS+10HOURS]

- Buzz session.
- Mind mapping.
- Presentation.
- Narrative expression session in small or medium groups.
- Community living camps.
- Visits.
- Interview.
UNIT IV- RESEARCH INPUTS IN SANSKRIT LEARNING[14 HOURS+7HOURS]

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
EDU – 10.4 : TECHNO PEDAGOGIC CONTENT KNOWLEDGE ANALYSIS : SANSKRIT.

[Transactional hours -60+ CE – 30 hours]

OBJECTIVES:
• To develop teacher as a Techno-pedagogue
• To familiarize with the concept of teacher as a techno-pedagogue.
• Identifies ways of professionalizing Language education in a techno-pedagogic scenario.
• To practice networking activities and related resources
• To understand the Global trends in Sanskrit Education.

CONTENTS:
UNIT-I  TPCK AND SELF INSTRUCTIONAL STRATEGIES.
UNIT-II  NET WORKING IN LANGUAGE LEARNING.
UNIT-III  MODELS OF TEACHING IN LANGUAGE PRACTICE.
UNIT IV  GLOBAL TRENDS IN SANSKRIT LANGUAGE EDUCATION.

UNIT I - TPCK AND SELF INSTRUCTIONAL STRATEGIES.[15HOURS+8HOURS]

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
ICT based Lesson Template. 
Group discussions. 
Preparation of programmed instructional materials. | • Participant observation. 
• Discussion and Participant observation. 
• Analysis the role performance. 
• Performance. 
• Role performance. 
• Test- 5 Marks. |
UNIT II - NETWORKING IN LANGUAGE LEARNING[13HOURS+7HOURS]

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
UNIT III MODELS OF TEACHING IN LANGUAGE PRACTICE.[18HOURS+8HOURS]

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To prepare different types of Models of Teaching.</td>
<td>• Dimension of a Model-Syntax, Social System, Principles of Reaction, Support system, Instructional and Nurturant effects.. Concept attainment model, Enquiry Training Model, Advance Organizer Model, Synectics Model, Role play Model</td>
<td>Lecture cum Demonstration. Group discussion. Narrative expression. Lesson plan and demonstration class. Criticism Lessons. Presentation.</td>
<td>• Observation. • Role performance. • Participant observation. • Role performance. • Performance observation and recordings. • Performance.</td>
</tr>
</tbody>
</table>

UNIT IV - GLOBAL TRENDS IN SANSKRIT LANGUAGE EDUCATION[14HOURS+7HOURS]

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
Dhyana etc. Influence of Sanskrit literature on spirituality and existing spiritual practices like Art of living, Isha Yoga, Sahajamargam, Reiki etc. Daily reading of Ramayana, Bhagavadgita, Bhagavata, Stotrautras. Daily prayers of all religions.

- Spiritual leaders contribution to Sanskrit - Chattambiswamikal, Sreenarayanaguru, Sankaracharya, Swami Vivekananda.
- Influence of Sanskrit to various cultures - Thailand, Indonesia, etc.
- Comparative Education as a new Subject - Comparison with other languages [English, Malayalam, Hindi]
- Contribution of Sanskrit to other disciplines - Medicine, Ayurveda, Music, Agriculture, Law, etc.

<table>
<thead>
<tr>
<th>Knowledge</th>
<th>Group Discussion.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Collect resources.</td>
</tr>
<tr>
<td></td>
<td>Discussions.</td>
</tr>
<tr>
<td></td>
<td>Meaning full verbal expressions.</td>
</tr>
<tr>
<td></td>
<td>Presentation.</td>
</tr>
</tbody>
</table>

- Performance.
- Practicals-10 Marks.
EDU.09.5: CURRICULUM AND RESOURCES IN DIGITAL ERA – Arabic Education

[Transactional hours - 60+ CE – 30 hours]

Objectives:
On completion of the course the student teacher will be able to:
• Familiarize with the principles of curriculum construction and organization
• Acquaint with teaching and learning resources available in the formal and informal contexts
• Develop the ability to prepare instructional materials in various forms for effective transaction
• Explore and practice infotainment activities in language
• Enable to promote student effort in learning
• Equip to manage diverse learner needs in language classes
• Develop interest in innovative practices in the field of Arabic Language Teaching and learning

Contents
UNIT I: CURRICULUM DESIGNING IN ARABIC LANGUAGE EDUCATION
UNIT II: COMMUNITY BASED TEACHING & LEARNING OF ARABIC LANGUAGE
UNIT III: E-RESOURCES IN TEACHING & LEARNING OF ARABIC LANGUAGE
UNIT IV: RESEARCH INPUTS IN ARABIC LANGUAGE LEARNING

UNIT I: CURRICULUM DESIGNING IN ARABIC LANGUAGE EDUCATION

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Familiarizes with the principles of curriculum construction and organization</td>
<td>• Curriculum: Meaning, Definition &amp; Principles</td>
<td>Introductory Lecture Discussion</td>
<td>CE</td>
</tr>
<tr>
<td>2. Acquaints with various trends in modern language curriculum</td>
<td>• Approaches to curriculum construction</td>
<td>Discussion</td>
<td>Assignments</td>
</tr>
<tr>
<td></td>
<td>• Curriculum and syllabus, Types of Curriculum, language curriculum</td>
<td>Group Discussion</td>
<td>Discussion reports</td>
</tr>
<tr>
<td></td>
<td>• Criteria for selecting curriculum content</td>
<td></td>
<td>Debate</td>
</tr>
<tr>
<td></td>
<td>• Modern Trends in Curriculum Construction: Life Centered- Learner Centered- Activity</td>
<td></td>
<td>Class test</td>
</tr>
</tbody>
</table>

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UNIT II: COMMUNITY BASED TEACHING & LEARNING OF ARABIC LANGUAGE

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. Acquaints with teaching and learning resources available in the formal and informal contexts | Community Based Teaching and Learning Resources: Formal & Informal learning contexts  
Role of University Departments, Arabic Colleges, Dars system, Religious madrasas  
Society as Language Lab  
Role of films and Theatres, Newspapers, Magazines & Electronic Medias etc.  
Language forums, Interview & Talks by Experts, Exposure to events of National Importance; Celebration of International Arabic Day | Introductory Lecture  
Discussion  
Group Discussion  
Observation  
Narration | CE  
Observation  
Discussion report  
Assignments  
TE |
| 2. Develops the skill of applying community based learning resources in teaching and learning | | | |

UNIT III: E-RESOURCES IN TEACHING & LEARNING OF ARABIC LANGUAGE

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. Explores and practice infotainment activities in language teaching | E-learning and E teaching:  
Digital text books/E-book, Digital library & other online resources  
Designing of Digital text books, e-books and | Introductory Lecture  
Discussion | CE  
Workshop report  
Discussion report  
Observation |
<p>| 2. Develops interest in innovative practices in the field of Arabic | | | |</p>
<table>
<thead>
<tr>
<th>Language Teaching and learning</th>
<th>its application</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Adopting downloaded resources for teaching Arabic</td>
</tr>
<tr>
<td></td>
<td>2. M-learning: Smart phones as Learning Devices and its scope</td>
</tr>
</tbody>
</table>

**Group Discussion**
- Observation
- Narration

**UNIT IV: RESEARCH INPUTS IN ARABIC LANGUAGE LEARNING**

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To review and disseminate the recent researches in the field of Arabic language | - Researches in Arabic Language Education and Second Language Pedagogy  
- Identifying and locating significant concerns related to Arabic language learning  
- Action Research –Investigating learner issues  
- Review of Recent Research Studies in Arabic Language Education  
- Place of Arabic language as a source of knowledge | Introductory Lecture  
Discussion  
Group Discussion  
Observation  
Narration | - CE  
- Reports  
- Assignments  
- TE |
| 2. Equips to manage diverse learner needs by conducting actions Research in Arabic Language Education | | | |

**References:**
- Thatweeru Adai -al Muallim; kifayathu thaaleem wa thahleel al muthawasila : Hashim Uwaidha, Dar al Ilm al Malayeen , Labanan
- Thaaleemu al lugha al arabiyya baina nadriyya wa thathbeeq: Dr Hasan Al Shahatha, Dar Misriyya wa llubnaniya
- Thareeqathu Thadreesi Wa strateejiyyathuhu: Dr Muhammed Mahmmod al Haila, Dar Al Kitab Al Jamia, Al ain, UAE
- Thaaleem al lugha al Arabiya lighairi al nathiqeena biha : Makthab al tharbiyya al Arabi liduwal al Khaleej
- Thuruqu thadrees al lugha al Arabiya lil madaris al muthawasitha wa thanaiyya : Hasan Mulla Uthman ; Dar alam al Kuthub lithbaa wa nnashshr wa thouzeea, Riyadh, KSA
- Thaqnolojiya al Thaaleem; Al wasail al thaaleemiyya wa thaqniyyath al thaluum: Dr. Muhammed Assam Tharbay , Dar Hammurabi lilnashri wa thouzeea
- Asaleeb Wa Thuruqu al-Thadrees al Hadeesa : Dr. Muhammed Assam Tharbaya; Dar Hammurabi lilnashri wa thouzeea
- Providing teachers effective strategies for using technology techtrends: Brown B& Henscheid
- The systematic Design for Instruction: Dick,W& L(1990)
- Istheeratejjiyyath wa Maharar al Tharees :Kamal al Jundi; Dar al Jumhooriya lilthibaa
- Wasaail al Ithisal wa thaknologiya fithaaleem :Dr Abd al hafiz mhuammed salama ,Dar al Fjkar
- Al thadrees wa Iadad al Muallim: Dr.S Abdulrahman qindeel Dar al Nashr al Duwali
- Murshid al Muallim: Richard D. C ; Aalam al Kutub al Qahira
- Al Thadrees Ahdafuhu wa usasuhu wa Asaleebuhu Thaqweemu Nathaijuhu wa Thathbeeqathuhu: Dr Fikri Hasan Rayan, Aalm al kutub , al qahira
- Madkhal Ilia Tharbiya al muthamayyizeena wal Mauhoobeen, Dar al fikar lial thibaa wa Nashr
- Kuthub al Mudariseen lil madaris al thanawiyya: Majli al wilaya lilbuhuzu thabaviyya wathadreeeb
- Al tharbiya wa thuruqu thadrees: Salih abdul Azeez& Abdul Azeez Abdul Majeed; Dar al Maarif, Al Qahira
- Kaifa Thulqi Darsak: Yabhasu fi usooli al tharbiyath wa thadrees, Dar al Ilm lil Malayeen , Bairut.
- Al Muwajjah al Amali li Mudarrisee al Lugha Al Arabiyya: Abid Thoufeeq al Hashmi; Al Risala publishing House, Bairroot
- National Curriculum Frame work 2005 , NCERT , New Delhi
- Teaching Strategies: A guide to better instructions, HMCo. New York
- Research in Education; Best J W, & Kahn J.V, prentice hall India Pvt Ltd.
**EDU.10.5 : TECHNO- PEDAGOGIC CONTENT KNOWLEDGE ANALYSIS – ARABIC**

*(Theoretical Discourses - 60 hours & CE – 30 hours)*

**Objectives:**

On completion of the course the student teacher will be able to:

- Develop an understanding of techno-pedagogy and its principles
- Familiarize with the ways and importance of networking for professional and institutional growth
- Develop the ability and acquires the teaching skills by practicing complex skills of classroom teaching
- Develop the skill of enhancing web based resources in teaching
- Familiarize with basic concept of models of teaching and apply in classroom teaching
- Acquire the ability to design lesson templates based on selected Models of teaching
- Familiarize with the global trends and developments in pedagogic practices of Arabic language Education

**Contents**

UNIT I : TPCK AND SELF INSTUTIONAL STRATEGIES

UNIT II : NETWORKING IN ARABIC LANGUAGE LEARNING

UNIT III : MODELS OF TEACHING IN PRACTICE

UNIT IV : GLOBAL TRENDS IN ARABIC LANGUAGE EDUCATION

**MODULE: UNIT I: TPCK AND SELF INSTRUCTIONAL STRATEGIES**

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Develop an understanding of Techno- pedagogic content knowledge Analysis</td>
<td>Techno Pedagogic Content Knowledge Analysis (TCPKA)</td>
<td>Introductory Lecture Discussion Group Discussion Observation</td>
<td>CE Report Workshop-products TE</td>
</tr>
<tr>
<td>2. Develops the ability and acquires the teaching skills by practicing complex skills of classroom teaching</td>
<td>Inter relationship of Content Knowledge, Pedagogical Knowledge &amp; Technological Knowledge</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Scope and challenges of TCPKA in Arabic language Teaching</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Teacher as a Techno Pedagogue</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning Outcome</td>
<td>Major concepts</td>
<td>Strategies &amp; Approaches</td>
<td>Assessment</td>
</tr>
<tr>
<td>------------------</td>
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</tr>
<tr>
<td>1. Familiarize with the ways and importance of networking for professional and individual growth</td>
<td>Networking in Teaching and learning, Networking for professional growth, Professional communities: E-twinning for institutional &amp; professional growth, Forming forum of online learning: Emails, blogs, teacher tube, for promoting teaching and learning of Arabic, Learning Management System – MOODLE</td>
<td>Introductory Lecture, Discussion, Group Discussion, Observation, narration</td>
<td>CE, Observation, Online Assignments, TE</td>
</tr>
</tbody>
</table>

UNIT III: MODELS OF TEACHING IN PRACTICE

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Familiarize with basic concept of models of teaching ways of employing it teaching</td>
<td>Models of Teaching: Basic Concepts and Properties: Syntax, Social System, support system, principles of reaction, Instructional &amp; nurturant effects</td>
<td>Introductory LectureDiscussion</td>
<td>CE, Assignments, Discussion report, TE</td>
</tr>
<tr>
<td>2. Acquire the ability to design lesson templates based of selected models</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
and apply in classroom teaching

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. Familiarizes with the global trends and developments in pedagogic practices of Arabic language education | • Position of Arabic Language in the Modern World  
• Arabic language education in Kerala  
• Pedagogic practices of Arabic Language in speaking / non speaking countries  
• Critical Analysis of teaching and learning of Arabic Language in Kerala | Introductory Lecture  
Discussion  
Group Discussion  
Observation  
Narration | • CE  
• Discussion  
• Seminar reports  
• TE |

UNITIV: GLOBAL TRENDS IN ARABIC LANGUAGE EDUCATION

References:
- Models of Teaching: Bruce Joyce & Marsha weil
- Thareeqathu Thadreesi Wa stratejiyyathuhu: Dr Muhammed Mahmmod al Haila, Dar Al Kitab Al Jamia, Al ain, UAE
- Al Mawajjah Al Fanni Li Mudarirsee al Lughal Al Arabiya: Abdul Aleem Ibrahim; Dar al maarif, Al qahira
- Thaaleem al lugha al Arabiya lighairi al nathiqeena biha : Makthab al tharbiyya al Arabi liduwal al Khaleej
- Tharuq thadrees al lugha al Arabiya lil madaris al muthawassitha wa thanaiyya : Hasan Mulla Uthman ; Dar alam al Kuthub lithbaa wa nnashshr wa thouzeea, Riyadh, KSA
- Thaqnolojiya al Thaaleem; Al wasail al thaleemiyya wa thaqiyyath al thaaluum: Dr. Muhammed Assam Tharbay , Dar Hammurabi lilnashri wa thouzeea
- Asaleeb Wa Tharuq al-Thadrees al Hadeesa : Dr. Muhammed Assam Tharbaya; Dar Hammurabi lilnashri wa thouzeea

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• Providing teachers effective strategies for using technology techtrends: Brown B& Henscheid
• Istawarathejiyyath wa Maharah al Tharees :Kamal al Jundi; Dar al Junhooorya lilithibaa
• Wasaail al Ithisal wa thaknologiya fittedaleem :Dr Abd al hafiz muhammed salama ,Dar al Fjkar
• Murshid al Muallim: Richard D. C ; Aalam al Kutub al Qahira
• Al Thadrees Ahdafu hu wa usasu hu wa Asaleebuhu Thaqweemu Nathajju hu wa Thathbeeqathu hu: Dr Fikri Hasan Rayan, Aalm al kutub , al qahira
• Thaqniyyath al thaaaleem( Mafhoomuha wa douruha fi thahseeni amaliyyath al thaaaleem wa thaallum: Badar Salih
• Kithab al Muallim : Majlis al wilaya lilbuhuzu thabaviyya wathadreeb (SCERT)
• Al tharbiya wa thuruqu thadrees: Salih abdul Azeez& Abdul Azeez Abdul Majeed; Dar al Maarif, Al Qahira
• Kaifa Thulqi Darsak: Yabhasu fi usooli al tharbiyath wa thadrees, Dar al Ilm lil Malayeen , Bairut.
• Al Muwajjah al Amali li Mudarrisnee al Lughha Al Arabiya: Abid Thoufeeq al Hashmi: Al Risala publishing House, Bairoot
EDU- 09.6 : Curriculum and Resources in Digital Era: Tamil Education

(Theoretical Discourses – 60 & CE – 30 hours )

Objectives:
• To familiarize with concepts related to Curriculum and Syllabus.
• To develop an understanding of the need and scope of school-community linkage.
• To identify and critique different types of Course Books.
• To explore possibilities of collaborative and cooperative learning.
• *To sensitize with ways of engaging classes in inclusive settings.
• To evoke a need to regularly update research in the field of TLT

Contents
Unit I: Curriculum Designing in Tamil Education
Unit II: Community Based Teaching and Learning of Tamil
Unit III: E-Resources in Teaching & Learning of Tamil
Unit IV: Research Inputs in Tamil Learning

Unit I: Curriculum Designing in Tamil Education (25 hours)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
### Unit II: Community Based Teaching and Learning of Tamil (20 hours)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. Acquaint with teaching and learning resources available in formal and informal contexts | - Teaching and learning resources  
- Formal & Informal learning contexts  
- Role of Language Institutes and Local Library for learning Tamil  
- Society as Language Lab - Film  
- Theatre  
- Literary clubs, Language forums  
- Interview and Talk by experts  
- Exposure to events of national importance  
- Inclusive Education- Concept, Need and significance; Ways of dealing with learners with LD/ Children with Special needs | Field visit  
Hands-on experience  
Group discussion  
Sharing of learning experience | Surveying  
Checklist  
Presentation of Field visit reports |

### Unit III: E-Resources in Teaching & Learning of Tamil (25 hours)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To analyze instructional materials in print and digital form for effective transaction  
2. To explore and practice infotainment activities in language | - Educational Websites  
- Tamil Virtual University  
- Virtual Classrooms  
- Online language games- vocabulary, grammar, spelling etc. | Presentation of specimen digital resources followed by critique on effectiveness | Performance evaluation  
Participant observation |
<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To enable student teachers to promote student effort in learning</td>
<td>• Research in Tamil Language Education and Second Language Pedagogy</td>
<td>Intro lecture</td>
<td>• Style of presentation</td>
</tr>
<tr>
<td></td>
<td>• Identifying and locating significant concerns related to language learning</td>
<td>Enquiry centred discussion</td>
<td>• Performance</td>
</tr>
<tr>
<td></td>
<td>• Action Research</td>
<td></td>
<td>• Examine communicative competence</td>
</tr>
<tr>
<td></td>
<td>• Investigating any one learner issue</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Review of Recent Research Studies in Tamil Language</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Place of Tamil in Inter disciplinary studies</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Current trends</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Unit IV: Research Inputs in Tamil Learning (20 hours)

Individual /Pair work
Exploring online resources and preparing report
EDU -10.6 : Techno Pedagogic Content Knowledge Analysis : Tamil.

(Theoretical Discourses – 60 & CE – 30 hours)

Objectives:

- To familiarize with the concept of teacher as a Techno-pedagogue.
- Identify ways of networking both for knowledge enrichment and instruction.
- Familiarize with the scope and possibilities of Models of teaching as an instructional design.
- Develops an awareness of global trends in Tamil Language education.

Contents:

Unit I: TPCK and Self Instructional Strategies.
Unit II: Networking in Language Learning.
Unit III: Models of Teaching in Language Practice.
Unit IV: Global Trends in Tamil Language Education

Unit I: TPCK and Self Instructional Strategies (25 hours)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. Familiarizes with the concept of teacher as Techno-pedagogue | • TCPK.  
• Techno-Pedagogy  
• Content Knowledge  
• Pedagogic Knowledge  
• Technology Knowledge  
• Teacher as a Techno-Pedagogue  
• Nature and scope of Self instructional Strategies  
• Programmed Instruction - Linear- Branching  
• Self Instructional modules  
• Computer Assisted Instruction(CAI)  
• Computer Based Instruction (CBI) | Comparison of same content available in different digital formats | Preparation of computer-based instructional material |
| 2. Identifies the inter-relationship between Content Knowledge, Pedagogic Knowledge and Technological Knowledge | | Group task to identify effectiveness of different digital content in realizing proposed learning objectives. | |
### Unit II: Networking in Language Learning (20 hours)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Familiarizes with ways of exploiting Internet resources for both knowledge</td>
<td>• Networking: -Teacher –Teacher; Teacher-Institution; Teacher-Student</td>
<td>Introductory talk</td>
<td>• Group presentation</td>
</tr>
<tr>
<td>enrichment and instruction</td>
<td>• Forum-Wiki- Blog-Video Conferencing</td>
<td>Demo in Smart Classroom</td>
<td>• Monitoring of activities in virtual world</td>
</tr>
<tr>
<td>2. Develops necessary skills for transmission of information and content using</td>
<td>• Professional communities - Tamil Teacher Blogs - Teacher Tube - TSL - LinkedIn</td>
<td>Pair-share</td>
<td>• Checking Popularity on Web</td>
</tr>
<tr>
<td>websites</td>
<td>• Content writing - Copy Writing - Outsourcing - Transcription</td>
<td>Collaborative tasks</td>
<td></td>
</tr>
</tbody>
</table>

### Unit III: Models of Teaching in Language Practice (25 hours)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Familiarizes with Models of Teaching as an instructional design and identifies</td>
<td>• Dimensions of a Model - Syntax, Social System, Principles of Reaction, Support</td>
<td>Distribution of Specimen Lessons based on specific Models</td>
<td>• Ability to transact the content/ realize objectives in the plans prepared</td>
</tr>
<tr>
<td>ways of employing them for teaching Prose, Poetry, Vocabulary and Grammar</td>
<td>System Instructional and nurturing effects</td>
<td>Group tasks for preparing lessons based on specific Models</td>
<td>• Checking effectiveness of Lesson Plans based on specific Models for chosen content</td>
</tr>
<tr>
<td></td>
<td>• Direct Instruction Model</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Concept Attainment Model</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Advance Organizer Model</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Synectics Model</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning Outcome</td>
<td>Major concepts</td>
<td>Strategies &amp; Approaches</td>
<td>Assessment</td>
</tr>
<tr>
<td>------------------</td>
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</tr>
</tbody>
</table>
| 1. Familiarizes with global trends in Language education | • Advanced Trends in Tamil Language Education  
• Exercises and pedagogic practices in Tamil language  
• Literary Translation as an exercise- poetry, fiction, prose, world classics from India, translation from English Literature, critical essays etc.  
• Journal Clubs – Review and discussion of studies and articles in Journals  
• Advanced Production of digital resources for Online tutoring | Lecture-cum-discussion on different pedagogical practices. Close reading of literary texts followed by group translation  
Comparison of articles in journals and magazines to identify form and style required for journal articles followed by critique of articles written by peers  
Critique of specimen digital resources followed by design and preparation of digital resources for Online tutoring | • Prepares samples  
• Peer evaluation  
• Performance in tests |
EDU – 09.7 : CURRICULUM AND RESOURCES IN THE DIGITAL ERA: MATHEMATICS EDUCATION

(Theoretical Discourses – 60 hours & CE – 30 hours)

Objectives:
• To strengthen the experience of the promising student teachers as Mathematics curriculum designers, transmitters and assessors
• To develop a neo humanistic attitude among the student teachers in the light of Mathematics-Technology-Society-Environment paradigm
• To undertake a self empowerment initiative in transacting the Mathematics Curriculum from a digital outlook
• To provide the required research based Mathematics learning experiences so as to undertake a habit of self development through inquiry and investigation

Contents:

Unit 1: Curriculum Designing in Mathematics Education
Unit 2: Community Based Teaching and Learning Resources in Mathematics
Unit 3i: E- Resources in Teaching and Learning Mathematics
Unit 4: Research Trends in Mathematics Education

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To understand curriculum and modern approaches in curriculum construction | • Concept of Curriculum  
• New approaches to curriculum Construction  
• Critical Pedagogy,  
• Problem Based Learning,  
• Constructivist Learning  
• Reflective learning  
• Experiential learning  
• Modern trends in curriculum construction  
• objective based  
• child centred  
• correlation | Meaningful verbal expression  
Buzz session  
PBL  
Peer instruction  
Seminar  
Web Streaming  
Blog reading | • Performance analysis in group  
discussions  
Observation  
Seminar reports  
Participation in the Seminar sessions  
Assessment of daily reflections /Assignment |

Unit I: Curriculum Designing in Mathematics Education (20 hours)
• help for higher education  
• Reflect as a unified discipline, flexible, practicable etc  
• Principles of Curriculum organisation –  
  • Topical and Spiral,  
  • Logical and Psychological,  
  • Correlation  
• Curriculum Study Groups - SMP SMSG, NMP, NCERT and SCERT

## Unit II: COMMUNITY BASED TEACHING AND LEARNING RESOURCES IN MATHEMATICS (15 hours)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To make the student teachers understand the need and importance of community based resources in the present scenario | • Concept of community based resources  
• Human resources  
• Natural resources- Mathematical aspects found in Environmental phenomena (congruence, similarity, ratio and proportion, geometric shapes, symmetry etc.)  
• Man made resources  
• Mathematics laboratory  
• Mathematics library  
• Mathematics Club  
• *Informal learning contexts such as Mathematics exhibitions, Fair, Field Trip etc. | Group discussions  
Meaningful verbal Presentation  
Power point presentations  
Assignments  
Seminar  
Field trip  
Community resource mobilization / Contextual analysis | • Performance analysis in group discussions  
• Observation  
• Seminar reports  
• Participation in the Seminar |
| 2. To understand the man made resources in the present context | | | |
| 3. To make familiarise with informal learning contexts | | | |
### Unit III: E- RESOURCES IN TEACHING AND LEARNING MATHEMATICS (15 hours)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To familiarise with the role of modern technology in the teaching and learning of Mathematics | • Digital resources-CD, DVD, Websites, digital text books  
• Learning management systems- definition and Significance  
• Identification of E-resources(Web 2.0 tools: Hot Potatoes, Teacher Tube, Edublog, m-learning-Nature and scope  
• Online Resources | • PowerPoint Presentations  
• Extension talks  
• On line learning  
• Web Streaming  
• Explicit teaching  
• Peer instruction | • Documentation  
• Assessment of individual performance  
• Think Aloud Sessions |

### Unit IV: RESEARCH TRENDS IN MATHEMATICS EDUCATION (10 hours)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To understand the need and importance of research in Mathematics education  
2. To familiarise the different types of research  
3. To identify major thrust areas of research in Mathematics Education | • Research in Mathematics Education- Need and importance  
• Types of Research  
• Qualitative & Quantitative  
• Historical, Fundamental and Action Research  
• Thrust areas of researches in mathematics education | • Net surfing  
• Blog reading  
• Action research  
• Invited lectures | • Blog posting  
• Project report  
• Documentation |

**References:**


**EDU – 10.7 : TECHNO- PEDAGOGIC CONTENT KNOWLEDGE ANALYSIS: MATHEMATICS.**

(Theoretical Discourses -60 hours & CE -30 hours)

**Objectives:**
- Undertake a self-empowerment initiative in transacting the Mathematics curriculum from a Techno-Pedagogical Content Knowledge perspective
- To get acquainted with different aspects of collaborative use of information communication technology
- To gain a perspective of basic theories and guiding plans for effective transaction of Mathematics.
- To understand the nature and importance of Mathematics from a global perspective

**Contents:**
- Unit 1: Techno-Pedagogic Content Knowledge and Self Instructional Strategies
- Unit 2: Networking in Mathematics Learning
- Unit 3: Models of Teaching in Practice
- Unit 4: Global Trends in Mathematics Education

**Unit 1: Techno-Pedagogic Content Knowledge and Self Instructional Strategies (15 hours)**

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To acquaint with the concept, meaning and scope of Techno-pedagogic Content Knowledge</td>
<td>Techno-Pedagogy; Techno-pedagogue-Concept, meaning and scope</td>
<td>Group discussions</td>
<td>Summative evaluation</td>
</tr>
<tr>
<td>2. To understand the role of the teacher as a techno-pedagogue</td>
<td>Role of teacher as a techno-pedagogue</td>
<td>Seminars</td>
<td>Performance analysis in group discussions</td>
</tr>
<tr>
<td>3. To enable the student teacher to generate and transact TPCK based content analysis of Secondary school text books and CD resources</td>
<td>Concept of TPCK</td>
<td>Meaningful verbal presentation</td>
<td>Observation</td>
</tr>
<tr>
<td>4. To help students to practice self-instructional strategies</td>
<td>Interrelationship of Content knowledge, pedagogic knowledge and technological knowledge</td>
<td>Participation in the Seminar</td>
<td>Examples cited in their lecture dramatisation</td>
</tr>
<tr>
<td></td>
<td>Scope and challenges of TPCK</td>
<td>Sessions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Generation and transaction of TPCK based content analysis of secondary school text books and CD sources</td>
<td>Power point presentations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self Instructional Strategies</td>
<td>Illustrations</td>
<td></td>
</tr>
<tr>
<td>Learning Outcome</td>
<td>Major concepts</td>
<td>Strategies &amp; Approaches</td>
<td>Assessment</td>
</tr>
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<td>-------------------------------------------------</td>
</tr>
</tbody>
</table>
| 1. To familiarise the student teachers with networking as a means of personal   | - Networking in learning Mathematics  
- Networking - Meaning and scope  
- Concept of E-twinning for institutional/professional growth  
- Creation of personal e-mail ID and BLOGS with a minimum of 5 posts for promoting the teaching and learning of Mathematics | Demonstrations  
Illustrations  
Video clippings  
Debating  
Web based illustrations  
Power point presentations | - Document analysis  
- Student reports  
- Digital document analysis  
- Blog posting  
- (Practicals)  
- Creation of blog and posting |
| and professional growth of teachers                                                 |                                                                                 |                                       |                                                 |
| 2. To provide hands on experience in online learning                              |                                                                                 |                                       |                                                 |
### Unit III: Models of Teaching in Practice (20 hours)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To understand models of teaching</td>
<td>• Models of teaching- meaning and concept</td>
<td>Meaningful verbal expression</td>
<td>• Performance analysis in group discussion</td>
</tr>
<tr>
<td>2. To understand the application of major psychological theories</td>
<td>• Components of a teaching model</td>
<td>Group discussion</td>
<td>• Class test</td>
</tr>
<tr>
<td></td>
<td>• Families of teaching models</td>
<td>Peer tutoring</td>
<td>• Observation assessment lesson templates using Models of Teaching</td>
</tr>
<tr>
<td></td>
<td>• Detailed study and practice on Concept</td>
<td>Observation</td>
<td>• (Discussion, Demonstration &amp; criticism lessons)</td>
</tr>
<tr>
<td></td>
<td>• Attainment Model, Inquiry Training Model,</td>
<td>Brain storming</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Constructivist Model, Discovery Model.</td>
<td>Video analysis</td>
<td></td>
</tr>
</tbody>
</table>

### Unit IV: Global Trends in Mathematics Education (10 hours)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To compare mathematics education across the world</td>
<td>• Comparison of Mathematics Education in World Wide</td>
<td>Web streaming</td>
<td>• Document analysis</td>
</tr>
<tr>
<td>2. To identify recent projects in teaching of Mathematics in India</td>
<td>• Mathematics teaching in developed countries-Japan, USA and UK</td>
<td>Documentation</td>
<td>• Blog posting</td>
</tr>
<tr>
<td></td>
<td>• *Mathematics teaching in developing countries- India, Pakistan Sri Lanka</td>
<td>Invited lectures</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Recent projects in Mathematics teaching in India- IT@school, OFSET, GURU.</td>
<td>Seminar</td>
<td></td>
</tr>
</tbody>
</table>
• Soman, K. *Ganitha sasthra bodhanam.*Thiruvananthapuram: Kerala Bhasha Institute.
EDU- 09.8: CURRICULUM AND RESOURCES IN DIGITAL ERA: PHYSICAL SCIENCE EDUCATION

(Theoretical discourses - 60 hrs, CE - 30 hrs)

Objectives:
- To strengthen the experience of the promising student teachers as Science curriculum designers, transmitters and assessors
- To develop a neo humanistic attitude among the student teachers in the light of Science-Technology-Society-Environment paradigm
- To undertake a self empowerment initiative in transacting the Physical Science Curriculum from a digital migrant outlook
- To provide the required research based science learning experiences so as to undertake a habit of self development through inquiry and investigation

Contents:
Unit 1: Curriculum Designing in Physical Science Education
Unit 2: Community Based Teaching and Learning of Physical Science
Unit 3: E-Resources in Teaching and Learning of Physical Science
Unit 4: Research inputs in Physical Science Education

Unit 1: Curriculum Designing in Physical Science Education (20+2=22 hours)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To acquaint with the concepts of curriculum and syllabus | • Curriculum and syllabus-Meaning.  
• Hidden curriculum.  
• Principles of curriculum construction.  
• Types of curriculum-subject centred, activity centred, core curriculum.  
• Approaches to curriculum organisation- Concentric approach, Spiral approach, Type study, Topical approach, Historical approach, Nature study, Nature rambling, General science and disciplinary approach  
• Critical analysis of secondary school curriculum in Physical Science prescribed by SCERT.  
• Trends in curriculum construction-SCERT | Meaningful verbal expression  
Buzz session  
PBL  
Peer instruction  
Seminar  
Web Streaming  
Blog reading | • Questioning  
• Role performance analysis in Buzz discussion  
• Concept mapping  
• Open book analysis |
and NCERT curriculum, Critical Pedagogy, Issue based curriculum, Problem Based Learning- Main features.
- Science-A Process Approach (SAPA), Cognitive Acceleration Through Science Education (CASE) / 'Let's Think through Science'
- Correlation- Incidental and systematic, Correlation within the subject, Correlation of Physical science with other subjects such as biology, mathematics, language, geography, history, earth science, music, art and craft, life and environment

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### Unit 2: Community Based Teaching and Learning of Physical Science (20+10=30 hours)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To acquaint with the concept and significance of community based resources</td>
<td>Community based resources- Meaning, need and significance</td>
<td>Narrative expression sessions in small or medium groups</td>
<td>Performance analysis</td>
</tr>
<tr>
<td>2. To familiarize various formal and informal learning contexts</td>
<td>Formal science learning contexts</td>
<td>Assignment</td>
<td>Quiz programme</td>
</tr>
<tr>
<td>3. To identify the contributions of human resources in local community</td>
<td>Science library-importance and organisation, web resources</td>
<td>Seminar</td>
<td>K-W-L charting</td>
</tr>
<tr>
<td>4. To identify governmental and non-governmental movements for popularizing science</td>
<td>Science laboratory- Importance and organisation, Registers, Rules, Accidents and First aid</td>
<td>Field trip</td>
<td>Profile presentation</td>
</tr>
<tr>
<td></td>
<td>Field trips and excursions- Need and importance</td>
<td>Community resource mobilization / Contextual analysis</td>
<td>Blog posting</td>
</tr>
<tr>
<td></td>
<td>Science fairs and exhibition-Significance, organisation and evaluation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Science club-Significance, organisation and activities</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Informal learning contexts:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Science Park, museum, historical</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
monuments, play grounds, music room, planetarium, ANERT,
- Human resources-Scientists and eminent personalities in local community
- Governmental and non-governmental movements and organisations for popularising science-Science Talent Search Programme, Science Olympiad, KVPY, Sasthraoposhini scheme

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To identify various digital resources in learning of Physical Science</td>
<td>Digital resources-CD, DVD, Websites</td>
<td>Web Streaming</td>
<td>Documentation</td>
</tr>
<tr>
<td>2. To understand the significance of Learning Management System</td>
<td>Learning Management System (LMS)-definition and significance.</td>
<td>Explicit teaching</td>
<td>Assessment of individual performance</td>
</tr>
<tr>
<td>3. To familiarize various e-resources</td>
<td>Identification of E-resources:</td>
<td>Peer instruction</td>
<td>Think Aloud Sessions</td>
</tr>
<tr>
<td>4. To understand nature and scope of m-learning</td>
<td>Web 2.0 tools: - Hot Potatoes, Puddle (Dynamic periodic table), Go!animate, Jing, Edmodo, Teacher Tube, Edjudo, Edublog, Chem Collective</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. To identify the challenges and means of rescue a teacher should possess in this digital era</td>
<td>E-learning-Nature and scope</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Today’s teacher – a digital migrant – challenges and means of rescue</td>
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</tbody>
</table>
### Unit 4: Research inputs in Physical Science Education (5+3=8 hours)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To understand the concept and scope of research inputs in science education</td>
<td>• Research inputs - meaning and scope&lt;br&gt;• Science teacher as a researcher&lt;br&gt;• Thrust areas of research in Physical Science</td>
<td>Net surfing&lt;br&gt;Blog reading&lt;br&gt;Action research&lt;br&gt;Invited lectures</td>
<td>• Blog posting&lt;br&gt;• Project report&lt;br&gt;• Documentation</td>
</tr>
<tr>
<td>2. To identify the role of science teacher as a researcher</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. To identify major thrust areas of research in Physical Science</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

### Reference
EDU – 10.8 : TECHNO-PEDAGOGIC CONTENT KNOWLEDGE ANALYSIS – PHYSICAL SCIENCE

(Theoretical Discourses - 60 hrs, CE - 30 hours)

Objectives:
- Undertake a self-empowerment initiative in transacting the Physical Science curriculum from a Techno-Pedagogical Content Knowledge perspective
- To get acquainted with different aspects of collaborative use of information communication technology
- To gain a perspective of basic theories and guiding plans for effective transaction of physical science
- To understand the nature and importance of physical science from a global perspective

Contents:
Unit 1: Techno-Pedagogic Content Knowledge and Self Instructional Strategies
Unit 2: Networking in Physical Science Learning
Unit 3: Models of Teaching in Practice
Unit 4: Global Trends in Physical Science Education

Unit 1: Techno-Pedagogic Content Knowledge and Self Instructional Strategies (15 + 8 = 23 hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To conceptualize the basic principles of Techno-Pedagogic Content Knowledge Analysis in Physical Science Teaching and Learning</td>
<td>Techno-Pedagogic Content Knowledge Paradigm-Interrelationship of Content Knowledge, Pedagogic Knowledge and Technological Knowledge, TPCK based content analysis of selected units of the secondary readers in Physical Science, Science teacher as a techno-pedagogue, Techno-pedagogic competencies, Self Instructional Strategies- Meaning, Types- Programmed Instruction (Linear, branching), Modular Instruction, Personalized System of Instruction, CAI and CMI</td>
<td>Small group discussion, Documentation, Web searching, Self-study, Power Point Presentations, Seminar, Didactic Questioning</td>
<td>Participant observation, Document analysis, On-task behaviour in class, Reflective journal</td>
</tr>
<tr>
<td>2. To identify the role of science teacher as a techno-pedagogue</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. To understand various Self Instructional Strategies</td>
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</tr>
</tbody>
</table>

Unit 2: Networking in Physical Science Learning (14 + 10 = 24 hrs)
### Learning Outcome

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To understand the role and purposes of networking in learning physical science | • Networking - Meaning and scope  
• Networking in learning of Physical Science- Purposes Types- Technical, Personal and Institutional  
• e-twinning for institutional or professional growth in learning of Physical Science | Net surfing  
Blog reading  
Invited lectures  
Digital Modular Expositions | • Digital document analysis  
• Blog posting  
• Debate  
• Online test |
| 2. To acquaint with the concept of e-twinning.                                   |                                                                                                                                                  |                                                                                        |                                               |

### Unit 3: Models of Teaching in Practice (25 +20 = 45 hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To understand the application of major psychological theories               | • Psychological theories for learning science- Piaget, Bruner, Gagne, Vygotsky and Ausubel, Gardner’s Multiple Intelligence Theory  
• Thinking skills - critical thinking, creative thinking, reflective thinking  
• Models of teaching-Concept Attainment Model, Inquiry Training Model, Advance Organiser Model, Constructivist and 5E model | Meaningful verbal expression  
Group discussion  
Peer tutoring  
Observation  
Brain storming  
Video analysis | • Analysis in group discussion  
• Class test |
| 2. To familiarize with various thinking skills                                   |                                                                                                                                                  |                                                                                        |                                               |
| 3. To understand models of teaching                                              |                                                                                                                                                  |                                                                                        |                                               |
### Unit 4: Global Trends in Physical Science Education (18 + 10 = 28hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To compare science education across the world</td>
<td>• Comparative Science Education World Wide-Science teaching in developed countries-Australia, Canada-Science teaching in developing countries-Indonesia, Srilanka</td>
<td>Web streaming</td>
<td>• Document analysis</td>
</tr>
<tr>
<td>2. To identify recent projects in science teaching in India</td>
<td>• Recent projects in science teaching in India-it@school, OFSET, GURU</td>
<td>Documentation</td>
<td>• Blog posting</td>
</tr>
</tbody>
</table>

**Reference:**
- AACTECommittee (2008): Handbook of Technological Pedagogical Content Knowledge (TPCK) for Educators: Washington, DC, Rutledge/Taylor & Francis
- Bruce R., Joyce, Marsha Weiland Emily Calhoun (2011): Models of Teaching (7th Ed.): USA, Pearson Education
EDU – 09.9: CURRICULUM AND RESOURCES IN DIGITAL ERA: NATURAL SCIENCE EDUCATION

(Theoretical discourses -50 Marks/60 hours & CE-25 Marks/30 hours)

OBJECTIVES: To enable the student teachers to:
- Understand the different types of resources for teaching Natural Science.
- Locate different reference materials related with Biological Science.
- Identify the school and community resources for better Biological Science learning.
- Familiarize and understand the natural resources, man-made resources in teaching Natural Science.
- Familiarize the different club activities related with Natural Science.
- Understand the steps of organizing field trip, excursion, science fair & exhibition.
- Understand the different approaches of organizing Biological Science curriculum.
- Familiarize the modern trends in curriculum movements in India and abroad.
- Familiarize and understand the e-learning resources for teaching Natural Science.
- Identify research inputs in genetic engineering, medical field & environmental issues.

CONTENTS:

Unit I: Resource for Natural Science Curriculum Transaction.
Unit II: Curriculum Trends in Biological Science.
Unit III: E-Resources in teaching Learning Natural Science.
Unit IV: An Introduction to Research Inputs in Biology.

UNIT-I-RESOURCE FOR NATURAL SCIENCE CURRICULUM TRANSACTION (Theory hours-20)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To understand different types of resources.</td>
<td>1.1 Different types of resources.</td>
<td>Group discussion</td>
<td>Quiz programme.</td>
</tr>
<tr>
<td>2. To understand the relevance &amp; scope of different types of resources.</td>
<td>1.2 Relevance &amp; scope of different types of resources.</td>
<td>Seminar</td>
<td>Participation in group discussion.</td>
</tr>
<tr>
<td>3. To understand, and utilize school based resources in formal and informal learning.</td>
<td>1.3 School based Resources For Science Learning.</td>
<td>PBL</td>
<td>Questioning.</td>
</tr>
<tr>
<td></td>
<td>1.3.1 Library -School and Class library-importance and its organization, Types of resources for accessing information- book,</td>
<td>Multimedia and interdisciplinary approach.</td>
<td>On-task behavior</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>Field trip report.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Assignments</td>
</tr>
</tbody>
</table>
| | | | Seminar presentation.
4. To develop skill in designing a high school biology laboratory.
5. To organize different extra-curricular activities related to science teaching.
6. To identify, and utilize different community resources for science learning.

| 1.3.2 Science laboratory- significance and organization –Designing a high school biology laboratory. |
| 1.3.4 Club activities - Science club, Science fair, Exhibition, Manuscript magazine, Field trip & Excursion, Community awareness programme and Living corners- Pisciculture, different types of garden(Vegetable, ornamental and Herbal). |
| 1.3.5 Text books- qualities of good science text book, Text book analysis. Supplementary reader. |
| 1.3.6 Hand book for teachers and Work book for learner. |
| 1.3.7 Reference material-encyclopedia, newsletters, magazines, journals. |
| 1.4 Community Based Resources For effective Science Learning |
| 1.4.1 Community resources for science learning- relevance and scope. |
| 1.4.2 Identification of Community resources for better science teaching and learning. |
| 1.4.3 Human resources- e.g. Resource persons/ eminent teachers/ personalities/ scientists in the local community. |
| 1.4.4 Natural Resources- e.g. pond /lake/river/sea/ forest/ wet land/ sacred grooves etc. |
| 1.1.5 Man made Resources- e.g. Museum/ Zoo/ Botanical garden/ Agrifarms / hospital, Krishi Vignjan Kendrum /Research centers under State & Central government. |

Team teaching.
Peer tutoring.
Meaningful verbal expression.
Organizing & designing science library, science laboratory.
## UNIT II. CURRICULUM TRENDS IN BIOLOGICAL SCIENCE (Theory hours-18)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. To familiarize different types of curriculum.</td>
<td>• 2.2 Approaches to curriculum organization-Topical, Subject, Concentric, Spiral and Integrated/Correlation approach (Incidental &amp; Systematic correlation).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. To understand and apply the principles of curriculum construction.</td>
<td>• 2.3 Factors affecting curriculum organization.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. To understand and compare the curricular movements in national and international level.</td>
<td>• 2.4 Criteria of a good Natural science curriculum.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. To understand the types of correlation in the teaching learning process.</td>
<td>• 2.5 Critical analysis of the prevailing secondary school biology syllabus.</td>
<td></td>
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<tr>
<td>6. To understand the importance of correlation in the teaching learning process.</td>
<td>• 2.6 Curriculum reforms in India(NCERT) &amp; abroad (BSCS).</td>
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<tr>
<td>7. To make a Critical analysis of the prevailing secondary school biology syllabus.</td>
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</tbody>
</table>
### UNIT III E-RESOURCES IN TEACHING LEARNING OF NATURAL SCIENCE (ICT Materials) (Theory hours-11)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To understand and compare the Educational CDs developed by SIET, NCERT, IT@ school for the learning of biology at secondary level.</td>
<td><strong>3.1</strong> An introduction to the contribution of e-learning materials developed by SIET, NCERT &amp; IT@ school for the learning of biology at secondary level.</td>
<td>Modular approach. Multimedia and interdisciplinary approach. Team teaching. Peer tutoring. Meaningful verbal expression. Group discussion. Using internet effectively for collecting information.</td>
<td>Participation in group discussion, Questioning, On-task behavior, Report of video analysis, Involvement in using e-journals, e-books related with Biology, Involvement in using virtual laboratory &amp; virtual dissection.</td>
</tr>
<tr>
<td>2. To familiarize you tube resources related with HS Biology.</td>
<td><strong>3.2</strong> You tube resources related with HS Biology.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. To familiarize e-journals, e-books related with Biology.</td>
<td><strong>3.3</strong> An introduction to e-journals, e-books related with Biology</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. To understand about the use of e-resources.</td>
<td><strong>3.4</strong> An introduction to websites devoted for science teaching &amp; learning.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. To develop a skill in using e-resources.</td>
<td><strong>3.5</strong> Meaning-relevance &amp; scope of virtual laboratory &amp; virtual dissection.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. To understand the meaning-relevance &amp; scope of virtual laboratory &amp; virtual dissection.</td>
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<tr>
<td>7. To identify &amp; use virtual laboratory &amp; virtual dissection related with HS Biology.</td>
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</table>

### UNIT-IV AN INTRODUCTION TO RESEARCH INPUTS IN BIOLOGY (Theory hours-11, )

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. To understand the emerging challenges related with organ</td>
<td><strong>4.2</strong> Research inputs in medical</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. To get an idea about the importance of family farming.
4. To get an idea about the existing waste disposal measures in a scientific way.
5. To suggest innovative measures to waste disposal.

<table>
<thead>
<tr>
<th>4.3 Research inputs in Environmental issues</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family farming, waste disposal.</td>
</tr>
</tbody>
</table>

References

- DavarMonika(2012):Teaching of Science: India, PHI Learning Pvt. Ltd.
• Ramakrishna, (2012). Methodology of Teaching Life Sciences, Dorling kindersly Pvt Ltd, India.
• AACTE Committee (2008): Handbook of Technological Pedagogical Content Knowledge (TPCK) for Educators: Washington, DC, Rutledge/Taylor & Francis.

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• http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.91....
• http://en.wikipedia.org/wiki/Technological_Pedagogical_Content...
• http://www.amazon.com/books/dp/0805863567
• http://ictevangelist.com/technological_pedagogical-and-conte
• How the web will change the classroom by Mohan, R., (2007).
• https://d1jt5u2soh3gkt.clc
EDU – 10.9 : TECHNO-PEDAGOGIC CONTENT KNOWLEDGE ANALYSIS -NATURAL SCIENCE.

(Theoretical Discourses -50 Marks/60 hours & CE-25 Marks /30 hours)

OBJECTIVES: To enable the student teacher to:

• develop Understanding And Application Of Techno-Pedagogic Content Knowledge Analysis
• develop Skill In Preparation And Practice Of Technology Enhanced Learning Materials.
• understand And Apply Online Assessment And Competency Enhancement Avenues.
• identify Net Working As A Means Of Personal And Professional Growth
• understand Classroom Management Principles Essential For Effective Pedagogic Transaction.
• get An Idea About Global Trends In Science Education.
• familiarize The Modern Trends In Science Education At Global Level.
• get An Idea About Self Instructional Strategies.
• understand About Self Instructional Strategies.

CONTENTS:
Unit – I : Technological Pedagogical Analysis Of Content Knowledge (TPACK).
Unit – II : Net working in Science Learning.
Unit – III : Models of teaching & Self-instructional Strategies.
Unit – IV : Global trends in Natural science Education.

UNIT.1 TECHNOLOGICAL PEDAGOGICAL ANALYSIS OF CONTENT KNOWLEDGE (TPACK)—A CONCEPTUAL ANALYSIS. (Hours-22)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To understand about the conceptual analysis of Technological Pedagogical Content Knowledge(TPACK)</td>
<td>• 1.1 Technological Pedagogical Analysis of Content Knowledge (TPACK)-meaning and scope. Different knowledge areas of TPACK-Content Knowledge (CK), Pedagogical Knowledge (PK), Technology Knowledge (TK), Pedagogical Content Knowledge (PCK), Technological Content Knowledge (TCK), Technological Pedagogical Knowledge</td>
<td>Meaningful verbal expression. Group discussion. Narrative expression sessions in small or medium groups. Multimedia and interdisciplinary</td>
<td>• Participation in group discussion. • Questioning. • On-task behavior in class. • Tests. • Science dairy. • Daily reflective journal • Participant observation • Report of Technological Pedagogical Content</td>
</tr>
<tr>
<td>2. To understand and find inter relationships of different areas of TPACK</td>
<td></td>
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</tr>
<tr>
<td>3. To develop skill in Technological Pedagogical Analysis of Content</td>
<td></td>
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</tr>
</tbody>
</table>
### Knowledge (TPACK) of Secondary School Biology.

- Technological Pedagogical Content Knowledge (TPCK).
- Interrelationships of different areas of TPACK.
- 1.2 Technological Pedagogical Content Knowledge Analysis of Secondary School Biology.

### UNIT-II NETWORKING IN SCIENCE LEARNING (Hours-18)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To understand the meaning &amp; scope of networking in science teaching.</td>
<td><strong>Networking</strong>- meaning and scope of networking in science learning.</td>
<td>Group discussion</td>
<td>Online assessment</td>
</tr>
<tr>
<td>2. To develop skill in Networking through different ways.</td>
<td><strong>Development of one Blog</strong> for Natural science class and 5 postings by each student for promoting teaching learning/social issues/challenges etc.</td>
<td>Seminar</td>
<td>Quiz programme.</td>
</tr>
<tr>
<td>3. To develop skill in the preparation and practice of ICT and Multimedia based materials in the teaching learning process of science</td>
<td><strong>e-twinning</strong>- means for institutional and professional growth.</td>
<td>Personality profile presentation</td>
<td>Participation in group discussion.</td>
</tr>
<tr>
<td>4. To develop skill in the preparation and practice of online assessment tools in science teaching learning process.</td>
<td><strong>2.4 ICT and Multimedia as technology enhanced communication devises in the teaching of life science</strong>- Collection/Preparation of e-materials for pedagogic transaction of secondary school biology syllabus including environmental issues affecting local community(Power points, video clippings, pictures, instructional materials)</td>
<td>Reflective practices.</td>
<td>Questioning.</td>
</tr>
<tr>
<td>5. To understand different competitive examinations for teachers.</td>
<td><strong>2.3 Online Assessment And Competency Enhancement avenues.</strong></td>
<td>PBL</td>
<td>On-task behavior.</td>
</tr>
<tr>
<td>6. To understand the Educational entrepreneurship - Career possibilities for trained graduate and post graduate science students</td>
<td><strong>2.3.1 Online assessment</strong>- meaning and scope, Down load an Online quiz maker and Blog posting.</td>
<td>Multimedia and interdisciplinary approach.</td>
<td>Student’s portfolio.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Team teaching.</td>
<td>Blog posting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Peer tutoring.</td>
<td>Online Assessment</td>
</tr>
</tbody>
</table>
2.3.2 Competitive examinations for secondary school students – Science Talent Search Scheme, Science Olympiad, Google science fair.
2.3.3 Competitive Examinations for teachers - KTET, NTET, TET.
2.3.4 Educational entrepreneurship - Career possibilities for trained graduate and post graduate science students.

UNIT-III MODELS OF TEACHING & SELF INSTRUCTIONAL STRATEGIES (Hours-15)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To understand the basic elements in the models of teaching</td>
<td>3.1 Models of teaching: Introduction, Elements and Families of models of teaching.</td>
<td>Meaningful verbal expression</td>
<td>Participation in group discussion.</td>
</tr>
<tr>
<td>2. To develop skill in selecting suitable models of teaching for transacting pedagogy.</td>
<td>Concept Attainment Model(CAM), Inquiry Training Model(ITM), 5E Model of BSCS, Inductive Thinking Model &amp; Role play model.</td>
<td>Group discussion</td>
<td>Questioning.</td>
</tr>
<tr>
<td>3. To develop and design lesson plans based on Concept Attainment Model(CAM), Inquiry Training Model(ITM), 5E Model of BSCS, Inductive Thinking Model &amp; Role play model.</td>
<td>3.3 Self Instructional Strategies - An overview about Self Instructional Strategies, advantages &amp; disadvantages.</td>
<td>Small group sessions</td>
<td>On-task behavior in class.</td>
</tr>
<tr>
<td>5. To understand about Computer Assisted Instruction (CAI), its advantages &amp; disadvantages.</td>
<td>3.5 Modules, its advantages &amp; disadvantages.</td>
<td>Narrative expression sessions in small or medium groups.</td>
<td>Science dairy.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PBL.</td>
<td>Lesson plans based on models of teaching.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Modular approach.</td>
<td>Module preparation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Multimedia and interdisciplinary approach.</td>
<td></td>
</tr>
</tbody>
</table>

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UNIT-IV GLOBAL TRENDS IN SCIENCE EDUCATION. Hours-5)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To familiarize & understand about the global trends in education. | • **4.1** An introduction to global trends in education  
• **4.1.1** University & career readiness  
• **4.1.2** Longitudinal perspectives  
• **4.1.3** Digital content  
• **4.1.4** Individualized learning | Narrative expression sessions in small or medium groups.  
Meaningful verbal expression  
Multimedia approach  
Discussion | • Participation in group discussion.  
• Questioning.  
• On-task behavior in class.  
• Tests.  
• Science dairy. |

References

- AACTE Committee (2008): Handbook of Technological Pedagogical Content Knowledge (TPCK) for Educators: Washington, DC, Rutledge/Taylor & Francis


**INTERNET REFERENCES**

- http://www7.nationalacademies.org/bose/21CentSKillUploads.html
- www.BuildingClassroomDiscipline.com
• http://www.theteachers guide.com/ClassMagement.htm
• http://www7.nationalacademies.org/bose/21CentSKillUploads.html
• http://www.theteachersatrisk.com/2010/07/18/most popular blog about classroom management.
• http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.91....
• http://en.wikipedia.org/wiki/Technological_Pedagogical_Conte...
• http://www.amazon.com/books/dp/0805863567
• http://ictevangelist.com/technological-pedagogical-and-conte
EDU - 09.10 : CURRICULUM AND RESOURCES IN DIGITAL ERA: SOCIAL SCIENCE EDUCATION

(Theoretical Discourses -50 Marks/60 hours & CE-25 Marks /30 hours)

Objectives :
- To get acquaint with modern principles and trends in the construction and organization of Social Science curriculum
- To become equipped in retrieving suitable teaching learning resources
- To attain proficiency in IT enabled instructional resources and to become talented in applying innovative strategies and approaches for instructional effectiveness.
- To generate a broad perspectives of e-resources in instructional practices and to develop skill in retrieving and transacting Social Science curriculum through e-resources.
- To develop a positive attitude towards research for curriculum development and to adopt& develop innovative teaching learning strategies.

Contents :
Unit 1  Curriculum Designing in Social Science Education
Unit 2  School and Community Based Instructional Resources in Teaching Social Science
Unit 3  E- Resources in Teaching and Learning of Social Science.
Unit 4  Research Trends in Social Science Education

Unit 1: Curriculum Designing in Social Science Education (7 Hours + 4 Hours)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To get acquaint with modern principles and trends in the construction and</td>
<td>• Curriculum – Concept, Principles of designing Social Science curriculum</td>
<td>Analytical approach</td>
<td>Seminar  with slide presentation (CE- Edu. 09)</td>
</tr>
<tr>
<td>organization of Social Science curriculum</td>
<td>• Approaches, types of curriculum, Modern trends in designing Social Science</td>
<td>Seminar</td>
<td></td>
</tr>
<tr>
<td>2. To become conversant with NCF and KCF to develop approaches to Social</td>
<td>• Brief outline about NCF (2005) KCF (2007) and its approaches in Social</td>
<td>Co-operative learning</td>
<td></td>
</tr>
<tr>
<td>Science Education</td>
<td>science curriculum formation.</td>
<td>Prepare a paper on NCF and KCF and its approaches to</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Social Science curriculum.</td>
<td></td>
</tr>
</tbody>
</table>

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Unit 2 : School and Community Based Instructional Resources in Teaching Social Science (8 Hrs + 4 Hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>To identify and to utilize community resources for the effective transaction of Social Science Curriculum</td>
<td>Community Resources- meaning, nature, need and scope in Social Science.</td>
<td>Field trip to any one site with action plan and report (<strong>Practical Sem.2</strong>)</td>
</tr>
<tr>
<td></td>
<td>School to community and community to school- The need and role of Social Science clubs in community related curricular programmes</td>
<td>School to community and community to school- The need and role of Social Science clubs in community related curricular programmes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Resources- Historical- Palace, museum, caves, forts, archives etc, Geographical-Planetorium, Mountains, seashore, rift valley etc, Political- Gramasabha, Panchayat, Legislative assembly, memorials etc, Economical- market, bank, stores etc.</td>
<td>Resources- Historical- Palace, museum, caves, forts, archives etc, Geographical-Planetorium, Mountains, seashore, rift valley etc, Political- Gramasabha, Panchayat, Legislative assembly, memorials etc, Economical- market, bank, stores etc.</td>
<td></td>
</tr>
</tbody>
</table>
References
- http://ericap.org
- http://www.ehow.com/

Unit 3: e- Resources in Teaching and Learning of Social Science

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To generate a broad perspectives of e-resources in instructional practices | • Concept of e-resources, Web resources, social networking, Educational blogs, e-journals, e-learning, m-learning, web based learning.  
• Learning Management System (LMS) in the teaching-learning of Social science.  
• IT enabled instructional resources: On line resources, videos, YouTube resources, animations, film clippings. | Online learning  
Web search  
Blogging and submission of online assignment | • Use e-resources to prepare any 4 learning materials  
• Test for units 1, 2 & 3 (CE-Edu. 09) |
| 2. To develop skill in retrieving and transacting Social Science curriculum through e-resources | | | |

Reference
- http://www.bbk.ac.uk/linkinglondon/resources/
- www.youtube.com/user/itsvicters
- en.wikipedia.org/wiki/IT@School_Project

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Unit 4 Research Trends in Social Science Education

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To develop a positive attitude towards research in the curriculum development process and to utilize the research findings in the teaching learning process. | • An introduction to Research in Social science Education- Need and importance  
• Teacher as a researcher in Social science  
• Analysis of Research outcomes in the teaching and learning of Social Science education. | Group Discussion  
Prepare a paper (utilizing internet) on the latest research findings on pedagogical aspects in Social science education and conduct a seminar. | • Observe the participation of student teachers in the learning process |
Reference

- http://www.edu.plymouth.ac.uk/resined/actionresearch/arhome.htm
- Leary, Zina O((2010). *Doing your research project*. New Delhi. SAGE
- www.moodle.org
- http://www.ncert.nic.in
- http://www.ciet.nic.in/
**Objectives**
- To conscientize the prospective teachers become a techno-pedagogue and become aware of the concept TPCK
- To grow to be competitive in designing digital texts and e-content in Social Science
- To familiarize with the networking system for institutional and professional growth.
- To get acquainted with the need of creating e-mail and blogs for pedagogical analysis.
- To prepare the prospective teachers as reflective practitioners

**Contents:**
- Unit 1: Techno Pedagogic Content Knowledge Analysis (TPCK) and Self Instructional Strategies
- Unit 2: Networking in Social Science Learning
- Unit 3: Models of Teaching in Social Science
- Unit 4: Global Trends in Social Science Education

### Unit 1: Techno Pedagogic Content Knowledge Analysis (TPCK) and Self Instructional Strategies

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To conscientize the prospective teachers become a techno-pedagogue | • Inter relationship between Technology, Pedagogy and Content.  
• Teacher as Techno-Pedagogue in Social Science  
• Scope and purpose of Techno-Pedagogic Content Knowledge Analysis.  
• Self Instructional Strategies: Importance  
• Programmed instruction  
• CAI and CMI  
• Instructional modules | Meaningful verbal learning  
On line learning  
Group discussion  
TPCK based content analysis (Selected units of secondary/ higher secondary text books) | Prepare a self explanatory note on ‘Teacher as a Techno-Pedagogue’  
TPCK based Content analysis on any one unit.  
Video script developing & recording & uploading  
( CE- Edu.10) |
References

- http://en.wikipedia.org/wiki/Technological_Pedagogical_Content
- Refrences:
- Mayer Richard E(2001); Multimedia Learning, Cambridge University Press, UK. McDonald &Evans Ltd. 1975
- Social Science text book of standard 8,9 & 10 of Kerala
- Teachers’ Hand book in Social Science for standard 8,9 &10

Unit 2 Networking in Social Science Learning

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To grow to be competitive in designing digital texts and e-content in Social science.</td>
<td>• Professional and Institutional growth: Through network-twinning • Student and Institution Networking • Online learning: Concept and system of online learning, virtual learning. • Creation of e-mail ID and blogs • Applications of Social Networking systems</td>
<td>Discussion Online learning Demonstration Workshop</td>
<td>• Observation • Report verification</td>
</tr>
<tr>
<td>2. To become empower in surfing digital resource for transacting Social science curriculum.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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### Unit 3 Models of Teaching

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To acquaint with the concept, families and selected items of Models of Teaching | - Models of teaching – Introduction, Operational Heart, Different families  
- Concept Attainment Model with lesson transcripts  
- Advance Organizer Model with lesson transcripts  
- Group Investigation Model with lesson transcripts.  
- Jurisprudential model & Inquiry Training Model | Scaffolding strategies  
Demonstration  
Simulation  
Online learning | - Discussion lesson-5(ICT-1, activity based-1, Models-3)  
- Demonstration- 2 (Models)  
- Criticism (5)  
- (Practicals – sem-2) |
| 2. To acquaint with practice of developing lesson transcripts based on selected Models of Teaching. | | | |
References

- http://www.guardian.co.uk/higher-education-network/

### Unit 4 Global Trends in Social Science Education

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
</tr>
</thead>
</table>
| 1. To help the prospective teachers for comparative study of social science education in a global perspective. | • Global trends in Social Science education  
• Social Science education in other states and other Nations.  
• Comparison of Social Science curriculum, textbook and transactional modalities with other countries. | Discussion – Web searching.  
Seminars - compare SS curriculum & Textbooks of SCERT, NCERT and any one advanced nations. |

### References

- http://tep.uoregon.edu/showcase/crmtool/strategies
- Social Science text book of standard 8, 9 & 10 of Kerala
EDU- 09.11 : CURRICULUM AND RESOURCES IN DIGITAL ERA - GEOGRAPHY EDUCATION

Hours of interaction: 60 (Instructional) +30 (Activities / Processes)

Objectives :
- To get acquainted with modern principles and trends in the construction and organization of Geography curriculum
- To become equipped in retrieving suitable teaching – learning resources
- To attain proficiency in IT enabled instructional resources and to become talented in applying innovative strategies and approaches for instructional effectiveness
- To generate a broad perspectives of e- resources in instructional practices and to develop skill in retrieving and transacting Geography Curriculum through- e- resources
- To develop a positive attitude towards research for curriculum development and to adopt and develop innovative teaching- learning strategies

CONTENTS :
Unit 1 : Curriculum Designing in Geography Education
Unit 2 : School and Community Based instructional Resources in Teaching Geography
Unit 3 : e- Resources in Teaching and Learning of Geography
Unit 4 : Research Trends in Geography Education

Unit 1 Curriculum Designing in Geography Education (16 hours + 6 hours)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To get acquaint with concepts, principles and modern trends in the construction and organisation of Geography Curriculum | • Importance and place of Geography in the curriculum  
• Curriculum – concepts determinants, patterns types, principles and modern trends  
• Curriculum organisational approaches – spiral /concentric/ topical  
• An outline of trends, patterns and approaches as suggested in NCF (2005) and KCF (2007) in Geography curriculum formation  
• Critical analysis of existing HS/HSS Geography curriculum | Analytical approach  
Debate  
Seminar  
Co-operative learning  
Web Search  
Lecture cum discussion | • Assessment of learning process and reflections  
• Prepare a brief sketch of NCF and KCF on Geography curriculum  
• Seminars  
• Assignments |
| 2. To become conversant with NCF and KCF to develop approaches to Geography Education | | | |
Reference

- http://www.case.edu/artsci/engl/emmons/writing/pedagogy
- AroraM.L (1979) Teaching of Geography, Prakash Brothers, Ludhiane

Unit 2: School and Community Based Instructional Resources in Teaching Geography (18 Hrs + 8 Hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To identify and to utilize community resources for the effective transaction of Geography curriculum</td>
<td>Community resources- meaning nature need significance and methods of utilization</td>
<td>Lecture cum discussion</td>
<td>Field visit/study report</td>
</tr>
<tr>
<td>2. To develop an understanding about the significance of Geography room, library, club, museum, excursion and field visits</td>
<td>Natural and man- made resources in Geography</td>
<td>Meaningful Verbal learning</td>
<td>Assignments on utilisation of community resources in teaching- learning of Geography</td>
</tr>
<tr>
<td></td>
<td>Relationship between school and community- bringing them together</td>
<td>Online learning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Features significance and way of organizing</td>
<td>Visit to any one of the community resource centres</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Geography room, library, club, museum</td>
<td>Planetarium</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exhibition hairs</td>
<td>Archaeological sites</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Exhibitions/ Fairs</td>
<td>CESS, IMD, SOI,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Excursion /field visits</td>
<td>Land USE/ Soil</td>
<td></td>
</tr>
</tbody>
</table>
Survey Departments etc
Prepare a list of community resources
Discuss and present the ways to utilize the community resources

Reference
- http://cricap.org
- http://www.ehow.com
- AroraM.L (1979) Teaching of Geography, Prakash Brothers, Ludhiane

Unit 3: E- resources in Teaching and Learning of Geography (16 hours + 6 Hours)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To generate a broad perspective of e- resources in Geography instructional practices</td>
<td>- Concept and importance of e- resources, web resources, social networking, Blogs, e-learning, m- learning and web- based learning in Geography</td>
<td>Online learning</td>
<td>- Use of 4 e-resource to prepare for learning materials</td>
</tr>
<tr>
<td>2. To develop skill in- retrieving and transacting Geography curriculum through e- resources</td>
<td>- Learning Management systems (LMS virtual library</td>
<td>Demonstration</td>
<td>- Internal test for units, 1, 2 and 3 CE-I, EDU-09</td>
</tr>
<tr>
<td>3. To identify the use of ICT in the teaching- learning of Geography</td>
<td>- Virtual library</td>
<td>Narrative expression</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Application of IT enables instructional resources in Geography online resources, Internet resources video conferencing etc</td>
<td>Web search</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Internet access</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Blogging and submission of online assignments</td>
<td></td>
</tr>
</tbody>
</table>
Unit 4: Research Trends in Geography Education (10 Hrs + 5 Hrs)

**Learning Outcome**
1. To develop a positive attitude towards research in the curriculum development process and to utilize the research findings in the teaching learning of Geography

**Major concepts**
- Need and significance of research in teaching – learning of Geography
- Need for developing innovative techniques and strategies in pedagogy and evaluation in Geography
- Teacher as a researcher in geography
- Action research in Geography need and significance

**Strategies & Approaches**
- Group discussion
- Online learning
- Group discussion
- Prepare a paper on research in pedagogical aspects
- Conduct seminar

**Assessment**
- Online assignment (Practical evaluation)
- Assignment preparation
- Reflections
Reference

- http://www.edn.playmonth.ac.uk/resined/action research/arhome.htm
- Alan Holmeister & Margaret Lake (1990) Research into Practice. USA: Allyn & Bacon
- www.Moodle.org
- http://www.cet.nic.in/
- http://www.ncert.nic.in
EDU - 10.11 : Techno Pedagogic Content Knowledge Analysis – Geography

Hours of interactions- 60 (instruction) +30 (Activities /Process)

Objectives
- To conscientize the prospective teachers become a techno pedagogue and become aware of the concept TPCK
- To grow to be competitive in designing digital texts and e-content in Geography
- To familiarise with the networking system for intuitional and professional growth
- To get acquainted with the need of creating e-mail and blogs for pedagogical analysis
- To prepare the prospective teachers as reflective practitioners

Contents :
Unit 1 Techno- Pedagogic content Knowledge Analysis (TPCK) and self- Instructional Strategies
Unit 2 Net working in Geography Learning
Unit 3 Models of Teaching in Geography
Unit 4 Global Trends in Geography Education

Unit I. Techno-Pedagogic Content knowledge Analysis (TPCK) and self instructional strategies. (16 Hrs +8 Hrs )

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To conscientize the prospective teachers become a techno pedagogue</td>
<td>TPCK- concept, scope, challenges</td>
<td>Meaningful verbal learning</td>
<td>Preparing notes</td>
</tr>
<tr>
<td>2. To become aware of the concept of TPCK</td>
<td>Inter- relationship with content, pedagogic and technological knowledge</td>
<td>On-line learning</td>
<td>Analysing content based on TPCK</td>
</tr>
<tr>
<td>3. To become capable of analysing contents based on technology</td>
<td>Technological knowledge required for a Geography teachers</td>
<td>Group discussion</td>
<td>Assignments</td>
</tr>
<tr>
<td>4. To get an awareness on self – instructional strategies</td>
<td>Self- instructional strategies</td>
<td>TPCK based content analysis</td>
<td>Video script developing and uploading</td>
</tr>
<tr>
<td></td>
<td>Need &amp; Importance</td>
<td>Internet access</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CAI &amp; Modular approach</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Reference

- http://en.wikipedia.org/wiki/Technological Pedagogical content
- Atkins N.J and Atkins. J.S Practical guide to Audio Visual Technologies in Education
- Social Science II text books a std. VIII, IX & X of Kerala
- Techer’s Handbook of Std VIII, IX & X Kerala
- Arora M.L (1979) Teaching of Geography, Prakash Brothers, Ludhiana

Unit 2 Networking in Geography Education (12 Hrs + 6 Hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To be aware of designing digital texts and e-content in Geography</td>
<td>Institutional networking and professional growth</td>
<td>Discussion</td>
<td>Observation</td>
</tr>
<tr>
<td>2. To familiarise with networking system for institutional &amp; Professional growth</td>
<td>Current high-tech classroom techniques</td>
<td>Online learning</td>
<td>Report verification</td>
</tr>
<tr>
<td></td>
<td>Creation of email ID/Blogs</td>
<td>Demonstration</td>
<td>Internal test for units 1 and 2 (EC- EDU.10)</td>
</tr>
<tr>
<td></td>
<td>Concept of on-line learning and virtual learning</td>
<td>Internet access</td>
<td>ICT based lesson and uploading as practical works</td>
</tr>
<tr>
<td></td>
<td>E- twinning</td>
<td>Workshop</td>
<td>Internal test for units 1 &amp; 2 (CE-EDU.10)</td>
</tr>
</tbody>
</table>

Reference

- http://teaching.history.org/issues-and research/round table
- www.net.security.org
- cybercoyote.org/security/sage-web.html
- http://en.wikipedia.org/wiki/Technological Pedagogical content
• Atkins N.J and Atkins. J.S Practical guide to Audio Visual Technologies in Education
• Madhukumar, Indira (2005) Internet based learning. New Delhi: global Network
• Social Science II text books a std. VIII, IX & X of Kerala
• Teacher’s Handbook of Std VIII, IX & X Kerala
• Arora M.L (1979) Teaching of Geography, Prakash Brothers, Ludhiana

### Unit 3 Models of Teaching in Geography (16 Hrs +8 Hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To acquaint with the concept, families and selected items of models of teaching | • Models of teaching- definition, concept, significance, essential elements  
• Families of models of teaching  
• Ausubel’s meaningful verbal learning  
• Advance organiser, Inquiry training, Jurisprudential and role playing models | Demonstration  
Online learning  
Simulation  
Scaffolding strategies  
Lesson transcript preparation  
Web search | • Discussion lesson  
• Demonstration lesson  
• Criticism  
• (Any 3 lessons on models of teaching)  
• Practical  
• Assignments |
| 2. To acquaint with developing lesson transcripts based on selected models of teaching | | | |

### Reference

- [http://www.guardian c.ul/higher-education-network/](http://www.guardian c.ul/higher-education-network/)
- [http://tep.uoregon.edu/showcase/crmotion/strategies](http://tep.uoregon.edu/showcase/crmotion/strategies)
- Arora M.L (1979) Teaching of Geography, Prakash Brothers, Ludhiana
## Unit 4 Global Trends in Geography Education (17 Hrs + 7 Hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To help the prospective teachers for comparative study of Geography education in a global perspective</td>
<td>• Geography Education global trends in the 21st century in the developed and developing countries in south-East Asia • Quantitative revolution in Geography • Geography education for children with special needs gifted/slow learners/culturally-deprived- nature, characteristics and activities</td>
<td>Discussion</td>
<td>• Seminars</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Web searching</td>
<td>Reporting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Seminars</td>
<td>Assignment</td>
</tr>
<tr>
<td></td>
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<td>Internet access</td>
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<tr>
<td></td>
<td></td>
<td>NCERT Text books</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Online learning</td>
<td></td>
</tr>
</tbody>
</table>

### Reference
- http/tep.Uorgegon.edu/Showcase/crmmodel/strategies
- NCERT Testbooks
- Teachers handbook in social science for Std.VIII, IX & X of Kerala
EDU - 09.12 : CURRICULUM AND RESOURCES IN DIGITAL ERA: COMMERCE EDUCATION

(Theoretical discourses - 60 Hrs + CE - 30 Hrs)

Objectives

- To get acquainted with modern principles and trends in the construction and organization of commerce curriculum
- To become systematically correlate instructional practices with life of the community to develop better public relations.
- To become equipped in retrieving suitable teaching learning resources
- To attain proficiency in IT enabled instructional resources for preparing text book, work book, handbook, source book etc in commerce.
- To become talented in applying innovative strategies and approaches for instructional effectiveness.
- To develop capability in managing heterogeneous learning set up.
- To generate a broad perspectives of e-resources in instructional practices and to develop skill in retrieving and transacting commerce curriculum through e-resources
- To develop a positive attitude towards research to develop inquiry skills and scientific investigation

Contents:
Unit 1  Curriculum Designing in Commerce Education
Unit 2  School and Community Based Instructional Resources in Teaching Commerce
Unit 3  E- Resources in Teaching and Learning of Commerce
Unit 4  Research Trends in Commerce Education

Unit 1: Curriculum Designing in Commerce Education (15 Hrs + 6 Hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To get acquaint with modern principles in the construction and designing of commerce curriculum | - Curriculum – Concept, Principles of designing commerce curriculum  
- Approaches, types of curriculum, Modern trends in designing commerce curriculum.  
Debate  
Seminar  
Co-operative learning | Group investigation summary reports  
Prepare a brief sketch of NCF and KCF |
| 2. To become conversant with NCF and KCF | | | |
## Unit 2: School and Community Based Instructional Resources in Teaching Commerce (13 Hrs + 7 Hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To develop a desire to take active involvement in community affairs  
2. To become systematically correlate instructional practices with life of the community; thereby develop better public relations. | • School and community based teaching – learning resources: school to the community and community to the school.  
• Co-curricular activities-school bank, commerce club, commerce library, commerce laboratory, commerce room etc. | • Discussion  
• Project method  
• Visit to commercial institutions/ industries | • Prepare a list of community resources- discuss and present the ways to utilize the community resources  
• Conduct a field study to any one of the resource centers. |

## Unit 3: e- Resources in Teaching and Learning of Commerce (18 Hrs + 10 Hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To generate a broad perspectives of e-resources in instructional practices  
2. To develop skill in retrieving and transacting commerce curriculum through e-resources | • Concept of e- resources, Web resources, social networking, Educational blogs, e-journals, pod casting, e-learning, m-learning, web based learning.  
• Learning management system (LMS) in teaching learning of commerce education.  
• IT enabled instructional resources: On line resources, videos, YouTube resources, animations, film clippings. | • Online learning  
• Demonstration  
• Narrative expression  
• Web search | • Use any e-resources to prepare any 4 learning materials |
## Unit 4 Research Trends in Commerce Education (14 Hrs +7 Hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To develop a positive attitude towards research | - An introduction to Research in Commerce Education- Need and importance  
- Commerce Teacher as a researcher  
- Analysis of Research outcomes in Commerce education both teaching and learning. | Group Discussion  
Brain storming  
Education Journal analysis | Prepare a paper (utilizing internet) on the latest research findings on pedagogical aspects in Commerce and conduct a seminar. |
| 2. To develop inquiry skills and scientific investigation | | | |

### References
- Leary, Zina O((2010). Doing your research project. New Delhi: SAGE
- http://www.bbk.ac.uk/linkinglondon/resources/
- www.youtube.com/user/itsvicters
- victers.itschool.gov.in/
- http://www.edu.plymouth.ac.uk/resined/actionresearch/arhome.html
- en.wikipedia.org/wiki/IT@School_Project
- www.youtube.com/user/itsvicters
- http://www.case.edu/artsci/engl/emmons/writing/pedagogy
EDU – 10.12 : TECHNO- PEDAGOGIC CONTENT KNOWLEDGE ANALYSIS – COMMERCE

(Theoretical discourses - 60 Hrs + CE -30 Hrs)

Objectives :
• To conscientize the prospective teachers become a techno-pedagogue and become aware of the concept TPCK
• To grow to be competitive in designing digital texts and e-content in commerce disciplines
• To become empower in surfing digital resource for transacting commerce curriculum.
• To familiarize with the networking system for institutional and professional growth.
• To get acquainted with the need of creating e-mail and blogs for pedagogical analysis.
• To prepare the prospective teachers as reflective practitioner
• To get acquaint with the principles and designing of assessment mechanisms and capable of implement it.
• To generate a professional aspiration among young world by preparing for competitive / placement exams
• To inculcate a broad perspectives of individualized institution

CONTENTS :
Unit 1 Techno Pedagogic Content Knowledge Analysis (TPCK) and Self Instructional Strategies
Unit 2 Networking in Commerce Learning
Unit 3 Models of Teaching in Commerce
Unit 4 Global Trends in Commerce Education.

Unit 1 Techno Pedagogic Content Knowledge Analysis (TPCK) and Self Instructional Strategies (15 Hrs + 8 Hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To conscientize the prospective teachers become a techno-pedagogue</td>
<td>Inter relationship between Technology, Pedagogy and Content, Teacher as Techno-Pedagogue.</td>
<td>Meaningful verbal learning</td>
<td>Prepare a self explanatory note on ‘Teacher as a Techno-Pedagogue’</td>
</tr>
<tr>
<td>2. To become aware of the concept TPCK</td>
<td>Scope and purpose of Techno-Pedagogic Content Knowledge Analysis.</td>
<td>Demonstration</td>
<td>TPCK based Content analysis on any one unit.</td>
</tr>
<tr>
<td>3. To become capable of analyzing content based on technology</td>
<td>TPCK based content analysis (Selected units)</td>
<td>On line learning</td>
<td></td>
</tr>
</tbody>
</table>

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of higher secondary commerce text book)

- Self Instructional Strategies: Importance
- Programmed instruction
- CAI, CMI, CML, Instructional modules

Group discussion

### Unit 2  Networking in Commerce Learning (13 Hrs + 7 Hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To become competent to analyze the ways in which Professional and Institutional growth established through network twinning. | Professional and Institutional growth: Through network-twinning  
Student and Institution Networking  
Online learning: Concept and system of online learning, virtual learning.  
Creation of e-mail ID and blogs  
Applications of Social Networking systems | Discussion  
Online learning  
Demonstration  
Workshop  
Group investigation | • Concept maps  
• Observation  
• Product presentation  
• Report verification |
| 2. To become skillful while creating e-mail ID and blogs. | | |

### Unit 3 Models of Teaching (18 Hrs + 8 Hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To interlock ‘models of teaching’ in effective instructional practices of commerce education. | Models of teaching – Introduction, Operational Heart, Different families  
Concept Attainment Model with lesson templates  
Inquiry Training Model with lesson templates  
Group Investigation Model  
Cognitive Apprenticeship Model  
5 E model with lesson templates | Demonstration  
Group discussion  
Co-operative learning | • Discussion lesson (5- three out of five should be Models of Teaching)  
• Demonstration (2)  
• Criticism (5/ 3models of teaching) |
| 2. To categorize, analyzes and applied the varied instructional models in commerce discipline. | | |

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Unit 4  Global Trends in Commerce Education (14 Hrs + 7 Hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To analyze the global trends in commerce education through comparison between India with other countries. | • Global trends in commerce education  
• Commerce education with India and USA  
• Entrepreneurship Education – India V/S Japan  
• Business Education in India and Bangladesh  
• Accounting Education – Comparison with India and Australia | Discussion  
Brain storming  
Inductive strategies  
Thinking strategies | • Idea presentation grid  
• Assignment and seminar reports |
| 2. To evaluate the significance of Entrepreneurship Education, Business Education and Accounting Education in modern era. | | | |

References
- [http://tep.uoregon.edu/showcase/crmodel/strategies](http://tep.uoregon.edu/showcase/crmodel/strategies)
- [http://www.guardian.co.uk/higher-education-network](http://www.guardian.co.uk/higher-education-network)
- [http://teachinghistory.org/issues-and-research/roundtable](http://teachinghistory.org/issues-and-research/roundtable)
- [www.net-security.org](http://www.net-security.org)
- [http://www.bbk.ac.uk/linkinglondon/resources/](http://www.bbk.ac.uk/linkinglondon/resources/)
- [www.youtube.com/user/itsvicters](http://www.youtube.com/user/itsvicters)
- [en.wikipedia.org/wiki/IT@School_Project](http://en.wikipedia.org/wiki/IT@School_Project)
- [victers.itschool.gov.in/](http://victers.itschool.gov.in/)
EDU-0 9.13 : CURRICULUM AND RESOURCES IN DIGITAL ERA- HOME SCIENCE EDUCATION

(Theoretical discourses - 60 hrs, CE - 30 hrs)

Objectives:
- To strengthen the experience of the promising student teachers as curriculum designers, transmitters and assessors
- To attain proficiency in IT enabled instructional resources for preparing teaching learning materials in Home Science.
- To generate a broad perspectives of e-resources in instructional practices and to develop skill in retrieving and transacting Home Science curriculum through e-resources
- To undertake a self empowerment initiative in transacting the Home Science Curriculum from a digital migrant outlook
- To provide the required research based science learning experiences so as to undertake a habit of self development through inquiry and investigation

Contents:
Unit 1: Curriculum Designing in Home Science Education
Unit 2: School and Community Based Teaching and Learning of Home Science
Unit 3: E-Resources in Teaching and Learning of Home Science
Unit 4: Research Trends in Home Science Education

Unit 1: Curriculum Designing in Home Science Education (20+4=24 hours)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To acquaint with the concepts of curriculum and syllabus</td>
<td>• Curriculum and syllabus-Meaning, Definition, Nature</td>
<td>Meaningful verbal expression</td>
<td>• Questioning</td>
</tr>
<tr>
<td>2. To understand and apply the principles of curriculum construction</td>
<td>• Principles of curriculum construction.</td>
<td>Buzz session</td>
<td>• Role performance analysis in Buzz discussion</td>
</tr>
<tr>
<td>3. To familiarize with the curriculum organization</td>
<td>• Types of curriculum-subject centred, activity centred, core curriculum, hidden curriculum</td>
<td>PBL</td>
<td>• Concept mapping</td>
</tr>
<tr>
<td>4. To familiarize with the recent trends in curriculum construction in state, national and international level</td>
<td>• Approaches to curriculum organisation-Concentric approach, Spiral approach, Topical approach, General science and disciplinary approach</td>
<td>Co-operative learning</td>
<td>• Open book analysis</td>
</tr>
<tr>
<td></td>
<td>• Critical analysis of Higher Secondary/Vocational Higher Secondary school curriculum in Home Science prescribed by</td>
<td>Seminar</td>
<td></td>
</tr>
</tbody>
</table>
5. To understand correlation of Home Science within the subject as well as with other subjects.

<table>
<thead>
<tr>
<th>SCERT.</th>
<th>Group discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Trends in curriculum construction-SCERT and curriculum, Critical Pedagogy, Issue based curriculum, Problem Based Learning- Main features.</td>
<td></td>
</tr>
<tr>
<td>• Correlation- Incidental and systematic, Correlation within the subject, Correlation of Home Science with other subjects such as Biology, Physiology, History, Chemistry, Economics, Commerce, Management studies, and Environmental Education.</td>
<td></td>
</tr>
<tr>
<td>Web Streaming</td>
<td></td>
</tr>
<tr>
<td>Blog reading</td>
<td></td>
</tr>
</tbody>
</table>

**References**

- Higher secondary Home Science text book (Plus 1 & Plus 2) prescribed by SCERT, KERALA
- Teacher’s source book of Clothing and embroidery text book ( Vocational Higher Secondary-Fist & Second year ). SCERT, KERALA
- [http://www.case.edu/artsci/engl/emmons/writing/pedagogy](http://www.case.edu/artsci/engl/emmons/writing/pedagogy)

### Unit 2: School and Community Based Teaching and Learning of Home Science (22+10=32 hours)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To acquaint with the concept and significance of community based resources | • Community based resources- Meaning, need and significance  
• Human Resources- resource persons/eminent persons and teachers from different fields of Home Science | Narrative expression sessions in small or medium groups | • Performance analysis in various participatory activities.  
• Quiz programme  
• presentation  
• Blog posting |
| 2. To familiarize various formal and informal learning contexts |                                                                 |                                          |                                                                            |
3. To identify the contributions of human resources in local community
4. To identify the material supports in learning Home Science

- Man made resources- Home science Library-importance and organisation, web resources, Home Science laboratory- Importance and organisation, Registers
- Community Resources/ Informal learning contexts- Food Processing Units, Social welfare department, ICDS-Balwadi/Anganwadi, Creche and preschool, Institution for special education, Rehabilitation centres, Textile units, Small scale industries and cottage industries.
- Field trips and excursions- Need and importance
- Home Science fairs and exhibition- Significance, organisation and evaluation
- Home Science club-Significance, organisation and activities

<table>
<thead>
<tr>
<th>Assignment Project</th>
<th>Seminar</th>
<th>Field trip</th>
<th>Organization of Home science Expo Community resource mobilization / Contextual analysis</th>
</tr>
</thead>
</table>

**References**

### Unit 3: E-Resources in Teaching and Learning of Home Science (15+7=22 hours)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To generate a broad perspectives of e-resources in instructional practices</td>
<td>• Concept of e-resources, Web resources, social networking, Educational blogs, e-journals, pod casting, e-learning, m-learning, and web based learning. • Learning management system (LMS) in teaching learning of Home Science education. • IT enabled instructional resources: On line resources, videos, YouTube resources, animations, film clippings.</td>
<td>Web Streaming Explicit teaching On line learning</td>
<td>• Documentation • Assessment of individual performance • Use of e-resources in preparing learning materials</td>
</tr>
<tr>
<td>2. To develop skill in retrieving and transacting Home Science curriculum through e-resources</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**References**
- [http://www.bbk.ac.uk/linkinglondon/resources/](http://www.bbk.ac.uk/linkinglondon/resources/)
- [www.youtube.com/user/itsvicters](http://www.youtube.com/user/itsvicters)
- [en.wikipedia.org/wiki/IT@School_Project](https://en.wikipedia.org/wiki/IT@School_Project)
- [victers.itschool.gov.in/](http://victers.itschool.gov.in/)
- [www.youtube.com/user/itsvicters](http://www.youtube.com/user/itsvicters)

### Unit 4: Research Trends in Home Science Education (8+4=12 hours)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To develop a positive attitude towards research</td>
<td>• An introduction to Research in Home Science Education- Need and importance • Home Science Teacher as a researcher • Analysis of Research outcomes in Home Science education both teaching and learning.</td>
<td>Group discussion on current researches in Home science education Action research</td>
<td>• Performance assessment • On line assignment</td>
</tr>
<tr>
<td>2. To develop inquiry skills and scientific investigation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. To understand the wide scope of employability of Home science learning</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Reference

EDU- 10.13 : TECHNO-PEDAGOGIC CONTENT KNOWLEDGE ANALYSIS – HOME SCIENCE

(Theoretical discourses - 60 hrs, CE - 30 hrs)

Objectives:
• Undertake self-empowerment initiative in transacting the Home Science curriculum from a Techno-Pedagogical Content Knowledge perspective
• To get acquainted with different aspects of collaborative use of information and communication technology
• To gain a perspective of basic theories and guiding plans for effective transaction of Home Science
• To understand the nature and importance of Home Science from a global perspective

Contents:
Unit 1: Techno-Pedagogic Content Knowledge and Self Instructional Strategies
Unit 2: Networking in Home Science Learning
Unit 3: Models of Teaching in Home Science
Unit 4: Global Trends in Home Science Education

Unit 1: Techno-Pedagogic Content Knowledge and Self Instructional Strategies (11 + 6 = 17 hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Techno-Pedagogic Content Knowledge Paradigm-Interrelationship of Content Knowledge, Pedagogic Knowledge and Technological Knowledge, scope and purpose</td>
<td>Small group discussion</td>
<td>Participant observation</td>
</tr>
<tr>
<td></td>
<td>TPCKA based content analysis- Higher Secondary /Vocational Higher Secondary Home Science text book</td>
<td>Web searching demonstration</td>
<td>Development of video script</td>
</tr>
<tr>
<td></td>
<td>Science teacher as a techno-pedagogue.</td>
<td>Power Point Presentations</td>
<td>On-task behaviour in class</td>
</tr>
<tr>
<td></td>
<td>Techno-pedagogic competencies,</td>
<td>Seminar</td>
<td>Reflective journal</td>
</tr>
<tr>
<td></td>
<td>Self Instructional Strategies- Meaning, Types- Programmed Instruction ,Modular Instruction, Personalized System of Instruction, CAI and CMI</td>
<td>On line learning</td>
<td>(Technological skill practice in classrooms)</td>
</tr>
</tbody>
</table>

References

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Unit 2: Networking in Home Science Learning (15+11 = 26 hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. To grow to be competitive in designing digital texts and e-content in Home science Education</td>
<td>• Professional and Institutional growth: Through network-twinging&lt;br&gt;• Student and Institution Networking&lt;br&gt;• Online learning: Concept and system of online learning, virtual learning.&lt;br&gt;• Creation of blogs.&lt;br&gt;• Applications of Social Networking systems</td>
<td>Discussion&lt;br&gt;Online learning&lt;br&gt;Demonstration&lt;br&gt;Workshop&lt;br&gt;Group investigation</td>
<td>• Digital document analysis&lt;br&gt;• Blog posting&lt;br&gt;• Debate&lt;br&gt;• Online test&lt;br&gt;• ICT based lesson designing and uploading in blog (1)</td>
</tr>
<tr>
<td>2. To become empower in surfing digital resource for transacting Home Science curriculum.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

References
- http://teachinghistory.org/issues-and-research/roundtable
- www.5learn.co/e-content-development
- www.aptaracorp.com/digital-content-production/econtent-development
- www.net-security.org
### Unit 3: Models of Teaching in Home Science (18 +10 =28 hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To understand the application of major psychological theories in learning. | • Psychological theories for learning science-A brief introduction of Piaget, Bruner, Gagne, Vygotsky and Ausubel, Gardener’s Multiple Intelligence Theory  
• Models of teaching – Introduction, definition, elements and families of models of teaching  
• Concept attainment model  
• Inquiry training model  
• Constructivist learning model  
• Advance organizer model  
• Group investigation model | Meaningful verbal expression  
Group discussion  
Peer tutoring  
Observation  
Brain storming  
Video analysis | • Analysis in group discussion  
• Class test  
• Discussion lessons (5, Three lessons out of five based on models of teaching)  
• Demonstration lessons (2)  
• Criticism lessons (5, Three lessons out of five based on models of teaching) - Performance, observation and recording |

#### References
- Bruce R. Joyce, Marsha Weiland Emily Culhoun (2011): ModelsofTeaching (7th Ed.): USA, PearsonEducation

### Unit 4: Global Trends in Home Science Education (12 +8 = 20hrs)

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. To understand Global trends in relation to House Science Education | • Home Science education in the global scenario  
• Home Science towards community Science-women entrepreneurships, Gender equality, extension and communication management system of selected developed and developing countries (USA,China, Japan) with special reference to | Web streaming  
Documentation  
Invited lectures | • Document analysis  
• Blog posting  
• Involvement in subject association activity  
• Video script: Development, enacting, recording and uploading |

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|                                |                                                                 |                                                                 |                                |
|--------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|                                |
|                                | • Brief history, approaches, organizational structure, linkage to research extension methods used and its comparative analysis with Indian system. | • Script writing for radio talk on a topic in home Science        |                                |

**References**

- http://jit.sagepub.com/tips/cross.dt
- www.sagepub.com/journalsindex.nav
- www.librarything.com/tag/clothing-cached
- AACTECommittee(2008):HandbookofTechnologicalPedagogicalContentKnowledge(TPCK)forEducators:Washington,DC,Rutledge/Taylor&Francis
- BruceR.Joyce,MarshaWeilandEmilyCalhoun(2011):ModelsofTeaching(7thEd.):USA,PearsonEducation
EDU – 201.2 : Health and Physical education

(2 credits – 60 hours & 50 marks)

Objectives:
• To acquire knowledge about the Track and Field events.
• To become familiar with major and minor games and to develop interest in sports and games
• To understand the ability to organize and conduct sports and games
• To understand the importance and values of recreational activities in the modern society
• To understanding of the psychological, sociological, and physiological significance of play & recreation.

Contents
Unit – 1  Track & Field or Athletic events – general awareness, rules and regulations, organization.
Unit – 2  Major and minor games – types, rules and regulations
Unit – 3  Tournaments – knock out and league, fixtures for tournaments
Unit - 4  Play & Recreation – need and importance, leisure time management, practice.
Unit – 5  Mental Health – meaning, problems and techniques.

Unit – 1: Track & Field or Athletic events – general awareness, rules and regulations, organization.

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. Acquire knowledge about the track and Field events | **Track and field or Athletic events** - 12 hours  
• General awareness on athletics  
• Rules and regulations of any one event in detail | Oral presentation  
Group activity  
Participation | • Group assessment  
• Organizing sports meet  
• Participation |
### Unit – 2: Major and minor games – types, rules and regulations

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. Become familiar with major and minor games and to develop interest in sports and games | Major and Minor games – 10 hours  
- Understanding major and minor games  
- Rules and regulations of any one major game in detail | Theoretical orientation  
Virtual learning platforms | Group assessment  
Intramural competitions |

### Unit – 3: Tournaments – knock out and league, fixtures for tournaments

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
</table>
| 1. Understand the ability to organize and participate in the conduct of sports and games | Tournaments – 8 hours  
- Knock out, league and combination tournaments  
- Method of drawing fixtures under knock out and league tournaments | Meaningful verbal expression  
Group activity sessions in small and medium group | Group assessment  
Assignments |
| 2. To familiarize the ways and measures to draw a standard athletic track. | Track and field marking – 8 hours  
- Standard 400 mts/200 mts Track marking  
- Field marking | Verbal presentation  
Group activity  
Field work | Field analysis through group performance. |
### Unit – 4: Play & Recreation – need and importance, leisure time management, practice.

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Understand the importance and values of recreational activities in the modern society</td>
<td><strong>Play &amp; Recreation – 12 hours</strong></td>
<td>Theoretical orientation</td>
<td>Group assessment</td>
</tr>
<tr>
<td>2. Understanding of the psychological, sociological, and physiological significance of play &amp; recreation</td>
<td>• Need &amp; Importance of Play &amp; Recreation</td>
<td>Demonstration</td>
<td></td>
</tr>
<tr>
<td>3. Practice recreational games</td>
<td>• Play theories</td>
<td>Group activity</td>
<td></td>
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<tr>
<td></td>
<td>• Values associated with practice of play &amp; Recreation</td>
<td></td>
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<tr>
<td></td>
<td>• Leisure time Management</td>
<td></td>
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<tr>
<td></td>
<td>• Recreational Games</td>
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<td></td>
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<td></td>
<td>• Practice of Recreational activities</td>
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</tbody>
</table>

### Unit – 5: Mental Health – meaning, problems and techniques.

<table>
<thead>
<tr>
<th>Learning Outcome</th>
<th>Major concepts</th>
<th>Strategies &amp; Approaches</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Understanding the importance of mental health and normal mental health problems to be addressed in general population</td>
<td><strong>Mental Health – 10 hours</strong></td>
<td>Narrative expressions</td>
<td></td>
</tr>
<tr>
<td>2. Get acquaint with the relaxation techniques to overcome mental health problems</td>
<td>• Introduction and overview of mental health</td>
<td>Demonstration</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Mental health problems</td>
<td>Practical sessions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Techniques to improve mental health</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Guidelines for Practical work

- Physical Education Record - 10 marks
- Winning prizes in sports and games - 5 marks
- Participation in sports and Games - 10 marks
- Initiative and Effort in organizing sports and games - 5 marks
- Internal written examination - 10 marks
- Practice of Yoga - 10 marks
EDU – 201.3: ART EDUCATION AND THEATRE PRACTICE

(Credit – 1, carries 25 marks/30 hours)

Contents:

Theatre practice in curriculum transaction:
- Workshop to develop simple drama/skit - Discussion about script writing on selected topic in the optional subject-theatre practice.
- Puppetry – types - use in classroom transaction – demonstration/video presentation.
- Role plays/ Mono act for transaction of different subjects-discussion and presentation.

Practicals:
- Prepare report on the importance of theatre practice in Education with selected examples. (maximum 15 pages) – 10 marks.
- Writing of script for a small drama/skit by selecting a topic in your subject (individual/group) - 15 marks.