# REGULATIONS AND SCHEME OF EXAMINATIONS

## SYLLABUS

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course</th>
<th>Course Name</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>110</td>
<td>Course–I</td>
<td>Education in Indian Society–Status, Problems and Issues</td>
<td>10</td>
</tr>
<tr>
<td>120</td>
<td>Course–II</td>
<td>Psycho – Pedagogy</td>
<td>12</td>
</tr>
<tr>
<td>130</td>
<td>Course–III</td>
<td>Curriculum Development</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Course–IV</td>
<td>Electives</td>
<td></td>
</tr>
<tr>
<td>141</td>
<td>,,</td>
<td>Pre-primary Education</td>
<td>16</td>
</tr>
<tr>
<td>142</td>
<td>,,</td>
<td>Vocational Education</td>
<td>18</td>
</tr>
<tr>
<td>143</td>
<td>,,</td>
<td>Educational Management</td>
<td>20</td>
</tr>
<tr>
<td>144</td>
<td>,,</td>
<td>Non-Formal Education</td>
<td>22</td>
</tr>
<tr>
<td>145</td>
<td>,,</td>
<td>Computer Education</td>
<td>24</td>
</tr>
<tr>
<td>146</td>
<td>,,</td>
<td>Guidance and Counseling</td>
<td>26</td>
</tr>
<tr>
<td>147</td>
<td>,,</td>
<td>Population Education</td>
<td>28</td>
</tr>
<tr>
<td>148</td>
<td>,,</td>
<td>Essentials of Teaching and Learning</td>
<td>30</td>
</tr>
<tr>
<td>149</td>
<td>,,</td>
<td>Adult Education</td>
<td>32</td>
</tr>
<tr>
<td>150</td>
<td>,,</td>
<td>Environmental Education</td>
<td>34</td>
</tr>
<tr>
<td>178</td>
<td>,,</td>
<td>Teacher Education</td>
<td>36</td>
</tr>
<tr>
<td>179</td>
<td>,,</td>
<td>Health, Yoga and Value Education</td>
<td>37</td>
</tr>
<tr>
<td>180</td>
<td>,,</td>
<td>Human Rights Education</td>
<td>39</td>
</tr>
<tr>
<td>189</td>
<td>,,</td>
<td>Evaluation, Elements of Statistics and Research</td>
<td>41</td>
</tr>
<tr>
<td>192</td>
<td>,,</td>
<td>Educational Technology</td>
<td>43</td>
</tr>
<tr>
<td>193</td>
<td>,,</td>
<td>Disaster Management Education</td>
<td>45</td>
</tr>
</tbody>
</table>

## COURSE–V(A) : OPTIONAL COURSES

For Post Graduate Students

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>152</td>
<td>Innovations, Trends and Approaches in Teaching of Mathematics</td>
<td>46</td>
</tr>
<tr>
<td>153</td>
<td>Innovations, Trends and Approaches in Teaching of Physics</td>
<td>47</td>
</tr>
<tr>
<td>154</td>
<td>Innovations, Trends and Approaches in Teaching of Chemistry</td>
<td>49</td>
</tr>
<tr>
<td>155</td>
<td>Innovations, Trends and Approaches in Teaching of Zoology</td>
<td>51</td>
</tr>
<tr>
<td>156</td>
<td>Innovations, Trends and Approaches in Teaching of History</td>
<td>53</td>
</tr>
<tr>
<td>157</td>
<td>Innovations, Trends and Approaches in Teaching of Economics</td>
<td>54</td>
</tr>
<tr>
<td>Course Code</td>
<td>Course Name</td>
<td>Page No.</td>
</tr>
<tr>
<td>------------</td>
<td>-------------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>158</td>
<td>Innovations, Trends and Approaches in Teaching of Commerce</td>
<td>56</td>
</tr>
<tr>
<td>176</td>
<td>Innovations, Trends and Approaches in Teaching of Botany</td>
<td>58</td>
</tr>
<tr>
<td>182</td>
<td>Innovations, Trends and Approaches in Teaching of Computer Science</td>
<td>59</td>
</tr>
<tr>
<td>185</td>
<td>Innovations, Trends and Approaches in Teaching of Political Science(HSL)</td>
<td>61</td>
</tr>
</tbody>
</table>

**COURSE–V(B) : OPTIONAL COURSES**

For Graduate Students and Post Graduate in English and Tamil

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>160</td>
<td>Content and Methodology of Teaching English</td>
<td>63</td>
</tr>
<tr>
<td>190</td>
<td>Content and Methodology of Teaching Tamil</td>
<td>65</td>
</tr>
</tbody>
</table>

**COURSE–VI : OPTIONAL COURSES**

For Post Graduate Students

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>159</td>
<td>Innovations, Trends and Approaches in Teaching English</td>
<td>68</td>
</tr>
<tr>
<td>191</td>
<td>Innovations, Trends and Approaches in Teaching Tamil</td>
<td>70</td>
</tr>
<tr>
<td>169</td>
<td>Content and Methodology of Teaching Mathematics (HSL)</td>
<td>73</td>
</tr>
<tr>
<td>170</td>
<td>Content and Methodology of Teaching Physics (HSL)</td>
<td>75</td>
</tr>
<tr>
<td>171</td>
<td>Content and Methodology of Teaching Chemistry (HSL)</td>
<td>76</td>
</tr>
<tr>
<td>172</td>
<td>Content and Methodology of Teaching Zoology (HSL)</td>
<td>78</td>
</tr>
<tr>
<td>173</td>
<td>Content and Methodology of Teaching History (HSL)</td>
<td>80</td>
</tr>
<tr>
<td>174</td>
<td>Content and Methodology of Teaching Economics (HSL)</td>
<td>82</td>
</tr>
<tr>
<td>175</td>
<td>Content and Methodology of Teaching Commerce (HSL)</td>
<td>84</td>
</tr>
<tr>
<td>177</td>
<td>Content and Methodology of Teaching Botany (HSL)</td>
<td>86</td>
</tr>
<tr>
<td>184</td>
<td>Content and Methodology of Teaching Computer Science (HSL)</td>
<td>88</td>
</tr>
<tr>
<td>186</td>
<td>Content and Methodology of Teaching Political Science (HSL)</td>
<td>90</td>
</tr>
</tbody>
</table>

**COURSE–VI : OPTIONAL COURSES**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>161</td>
<td>Content and Methodology of Teaching Social Science(TM/EM)</td>
<td>92</td>
</tr>
<tr>
<td>164</td>
<td>Content and Methodology of Teaching Mathematics(SL)</td>
<td>94</td>
</tr>
<tr>
<td>165</td>
<td>Content and Methodology of Teaching Physical Science(SL)</td>
<td>96</td>
</tr>
<tr>
<td>166</td>
<td>Content and Methodology of Teaching Natural Science(SL)</td>
<td>99</td>
</tr>
<tr>
<td>181</td>
<td>Content and Methodology of Teaching Computer Science(SL)</td>
<td>101</td>
</tr>
</tbody>
</table>

Records

Computer Course – Basics of Information and Communication Technology 107

**REGULATIONS**
A candidate shall be eligible for the degree of Bachelor of Education provided he has taken a degree in this university or a degree (B.A./B.Sc./B.Sc.Computer Science, M.A./M.Sc./M.Com.) in some other University accepted by the syndicate as equivalent thereto and also passed the prescribed examinations. The Graduates of Five year integrated degree programmes and P.G. degree programmes under CBCS system of the faculty of Arts, Science and Indian Languages are eligible for admission into B.Ed. degree programmes.

A candidate shall be admitted to the B.Ed. degree examination only if he/she forwards before the date of commencement of the examination satisfactory evidence of having qualified for degree in this university or in some other university accepted by the syndicate as equivalent thereto and produce, before the examination, a certificate that he/she has undergone, the prescribed courses in this university.

The B.Ed. degree examination shall be held twice a year at Annamalai nagar ordinarily in April and September or on such dates as the syndicate may prescribe.

Candidates who have undergone 10+2+3(15) or 11+1+3 pattern of study and passed the X and XII examinations conducted by the respective State Board or CBSC or any other recognised Board of Education/Examination and UG Degree Examination of the UGC approved Universities with the following main subjects in Part-III viz., Tamil (B.A., B.Lit), English, Mathematics, Physics, Chemistry, Botany, Zoology, History, Geography, Computer Science, Applied Chemistry, Biochemistry, Applied Physics, Environmental Science and Microbiology.

However, candidates not qualified in XII examination or PUC but possessing Two year Bachelor Preparatory Programme Certificate/Two Year Foundation Course Certificate/Two Year Diploma in Teacher Education Course conducted by the State Government recognised by the Universities and qualified with three years UG Degree Course are eligible for admission.

Candidates who have taken more than one main subject in Part-III (Double or Triple major) of the UG degree have to choose only one of the main subjects and apply for that optional in B.Ed.

Note: 1. The basis of selection, shall be in accordance with the regulations of the University/Government of Tamil Nadu Guidelines for admission to B.Ed. Programme in force from time to time.

2. NCTE Norms regarding Curriculum transaction shall be followed.

The courses of study, which shall last for one academic year, shall comprise of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Courses</th>
<th>Courses Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>110</td>
<td>Course–I</td>
<td>Education in Indian Society – Status, Problems and Issues</td>
</tr>
<tr>
<td>120</td>
<td>Course–II</td>
<td>Psycho – Pedagogy</td>
</tr>
<tr>
<td>130</td>
<td>Course–III</td>
<td>Curriculum Development</td>
</tr>
<tr>
<td></td>
<td>Course–IV</td>
<td>Electives</td>
</tr>
</tbody>
</table>

**PART–A : THEORY**

**ELECTIVES**
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Courses Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>141</td>
<td>Pre-Primary Education</td>
</tr>
<tr>
<td>142</td>
<td>Vocational Education</td>
</tr>
<tr>
<td>143</td>
<td>Educational Management</td>
</tr>
<tr>
<td>144</td>
<td>Non-Formal Education</td>
</tr>
<tr>
<td>145</td>
<td>Computer Education</td>
</tr>
<tr>
<td>146</td>
<td>Guidance and Counselling</td>
</tr>
<tr>
<td>147</td>
<td>Population Education</td>
</tr>
<tr>
<td>148</td>
<td>Essentials of Teaching – Learning</td>
</tr>
<tr>
<td>149</td>
<td>Adult Education</td>
</tr>
<tr>
<td>150</td>
<td>Environmental Education</td>
</tr>
<tr>
<td>178</td>
<td>Teacher Education</td>
</tr>
<tr>
<td>179</td>
<td>Health, Yoga and Value Education</td>
</tr>
<tr>
<td>180</td>
<td>Human Rights Education</td>
</tr>
<tr>
<td>189</td>
<td>Evaluation, Elements of Statistics and Research</td>
</tr>
<tr>
<td>192</td>
<td>Educational Technology</td>
</tr>
</tbody>
</table>

(N.B: Each Student Shall offer One Elective from the above)

**COURSE–V**


Content and Methodology of Teaching Tamil / English (secondary and Higher Secondary Level).

**COURSE–VI**

Content and Methodology of Teaching Mathematics / Physics / Chemistry / Botany / Zoology / History / Political Science / Economics / Commerce and Computer Science, (Higher Secondary Level).

Content and Methodology of Teaching Mathematics / Physical Science / Natural Science / Social Science / Computer Science at Secondary level.

Innovations, Trends and Approaches in Teaching of Tamil / English (Secondary and Higher Secondary Level).

Note: Each Student would be offered two optional from one in Course–V and one in Course–VI.
The Students will be allotted the optional subject combinations in accordance with the major/ancillary subjects of the graduate/Post graduate level subject to existing school curriculum (secondary Level/Higher Secondary Level).

1) The graduates and post-graduates in Tamil/English would be offered their respective subjects from Course–V and Course–VI.

2) The graduates in History, Geography, Political Science, Mathematics, Physics, Chemistry, MicroBiology, Botany, Zoology, Applied Chemistry, Bio-Chemistry, Applied Physics, Environmental Science and Computer Science would be offered Tamil/English from Course V and their respective subject from Course VI.

3) The post-graduates in other disciplines except English and Tamil, the respective Courses would be offered from V and VI.

4) The Tamil medium will be offered only to the graduates who have opted Course–V as Tamil. All the Post Graduates (I & II) except tamil will be offered in English medium only.

SCHEME OF EXAMINATIONS

PART–A

Written Examination

Written Examination shall be conducted in six courses for a maximum of 600 marks. 150 marks out of this maximum of 600 marks shall be allotted for continuous assessment, as shown below. The continuous assessment marks shall be forwarded to the Registrar by the Head of the Department on or before 31st March, for transmission to the Chairman of the Board of Examiners.

The marks to be obtained by the candidates in the University Examination in the respective Courses are as follows:

<table>
<thead>
<tr>
<th>Courses</th>
<th>Continuous Assessment Marks</th>
<th>Maximum Marks (External)</th>
<th>Duration in Hours</th>
<th>Minimum Marks for a Pass (External 45% Out of 75)</th>
<th>Total Marks</th>
<th>Minimum Marks for a Pass 50% Out of 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course–I</td>
<td>25</td>
<td>75</td>
<td>3</td>
<td>34</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>Course–II</td>
<td>25</td>
<td>75</td>
<td>3</td>
<td>34</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>Course–III</td>
<td>25</td>
<td>75</td>
<td>3</td>
<td>34</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>Course–IV</td>
<td>25</td>
<td>75</td>
<td>3</td>
<td>34</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>Optional Course–I</td>
<td>25</td>
<td>75</td>
<td>3</td>
<td>34</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>Course–V</td>
<td>25</td>
<td>75</td>
<td>3</td>
<td>34</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>Optional Course–II</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Course–VI</td>
<td>25</td>
<td>75</td>
<td>3</td>
<td>34</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>Total</td>
<td>150</td>
<td>450</td>
<td>–</td>
<td>–</td>
<td>600</td>
<td>300</td>
</tr>
</tbody>
</table>
Every candidate should appear for all the six theory Courses together in the written examination at the first time. A candidate shall be declared to have passed the examination if he/she obtains not less than 50% marks in each Course (continuous internal assessment and external examinations marks put together) with a minimum of 45% marks in each Course of the external examinations. A candidate who fails to secure the passing minimum in any course/courses and he/she can appear for the failed course/courses alone.

Candidates who have succeeded in the first attempt and obtained not less than 60% of the total marks shall be placed in the first class.

Continuous assessment regarding part A shall be based upon the performance of students in respect of the following items in each of the six Courses.

The work book shall consist of assignment in course given by the concerned staff.

Note: Directions regarding the preparation of the workbook in each shall be given by the staff concerned one month after admission.

Periodical test conducted by the concerned staff in their courses.

**PART–B**

**PRACTICAL EXAMINATIONS**

Marks for various courses of practical training shall be awarded as follows.

<table>
<thead>
<tr>
<th>Items</th>
<th>Max. Marks</th>
<th>Min. Marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit–I Teaching Competency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Optional Course–I</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>Optional Course–II</td>
<td>100</td>
<td>50</td>
</tr>
<tr>
<td>Unit–II Records (Practicals)</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>I Preparation of Instructional Softwares</td>
<td>50</td>
<td>25</td>
</tr>
<tr>
<td>II Construction of test and interpretation of scores</td>
<td>50</td>
<td>25</td>
</tr>
<tr>
<td>III Micro Teaching</td>
<td>50</td>
<td>25</td>
</tr>
<tr>
<td>IV Physical Education</td>
<td>50</td>
<td>25</td>
</tr>
<tr>
<td>V Psychological Testing and Case Study</td>
<td>50</td>
<td>25</td>
</tr>
<tr>
<td>VI Educational Tour (or) Camp Activities</td>
<td>50</td>
<td>25</td>
</tr>
<tr>
<td>VII Socially Useful Productive Work (SUPW)</td>
<td>50</td>
<td>25</td>
</tr>
<tr>
<td>VIII Environmental Education</td>
<td>50</td>
<td>25</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>600</strong></td>
<td><strong>300</strong></td>
</tr>
</tbody>
</table>

1) The teaching practice should be for a period of eight weeks duration (40 working days) and each student is to write at least twenty lesson plans in each optional course and deliver it.

2) All the working days are compulsory during the teaching practice period for the students of B.Ed., Relaxation of attendance in the teaching practice period, not exceeding 10 percent is applicable to only exceptional cases and not a general rule with prior permission from Head of the Department.
3) All Demonstration and all criticism classes are compulsory for the students to attend the teaching practice programme.

The teaching practice shall be preceded by demonstration classes and two weeks of micro teaching in the Department so as to develop any three major skills e.g. 1. Questioning, 2. Black Board writing, 3. Set induction, Evaluation shall be done for this at the end of the programme. The evaluation marks (internal) shall be handed over by the optional teachers concerned to the Head of the Department before the commencement of the practical training.

For the purpose of teaching practice, each student shall work as an apprentice under a selected teacher of an approved school and under the general supervision of the staff of the Department of Education. He/she shall also maintain the prescribed workbook for teaching practice in each optional course. Each workbook shall contain lesson plan of at least 20 lessons and each shall be approved by the guide teacher in the school.

Assessment regarding PART–A and PART–B (practical) shall be done by the staff concerned of the Department of Education.

The marks for Unit–I shall be given by the teacher concerned on the basis of their own assessment and on that made by the selected teachers in approved participating school in the teaching practice programme. The trainees are required to maintain records of the practical work done by them.

In order to standardize the assessment done by the Department in PART–B, the University shall appoint a Board of supervising Examiners. It shall be the duty of the Board (a) to observe and evaluate the lessons (b) to examine and decide the cases of candidates for whom 60% and above is recommended by the staff concerned and (c) to conduct interviews for all the candidates.

For the other aspect of the practical work coming under Unit–II, each student shall work under the staff concerned and shall maintain a workbook under his/her supervision. All Records as well as teaching aids prepared by the candidate shall be scrutinized by the Board of Examiners. If necessary, the Board of Examiners shall report to the university, the marks awarded to each student, in the two units of practical Examination separately and the class awarded to each student in the whole examination.

"Submission of all the prescribed records related to both Theory and Practical. (Continuous internal assessment Unit–I and Unit–II) is a pre-requisite to appear for the practical and theory examinations conducted by the university”.

A candidate shall be declared to have passed the PART–B (Practical) examination, if he/she obtain not less than 50% in each item in units I and II.

In the practical examination, those who have succeeded in the first attempt and obtained not less than 60% in respect of each of the units shall be placed in the first class.
Candidate shall be declared to have passed the practical examination if she/he obtain not less than 50% in respect of each item. All other candidates shall be deemed to have failed in the practical examinations.

A candidate who fails only in Unit–I of the practical examination may present himself or herself for this unit alone at a subsequent practical examination at which the Board of Examiners shall examine him or her in that unit alone for declaration of results. A candidate who fails only in Unit–II shall revise the concerned records alone and submit them to the Board of Examiners at the subsequent practical examination for evaluation. A candidate shall not be permitted to appear for the practical examination on more than two occasions, though the syndicate may in special cases permit candidate to appear on third occasion.

Successful candidates shall be classified separately for (a) written examination and (b) the practical examination. In the case of (a) written examination, candidates who have succeeded in the first attempt and obtained not less than 60% of the total marks shall be placed in First class. In the case of (b) practical examination candidates who have succeeded in the first attempt and obtained not less than 60% of the total marks in each of Unit–I and Unit–II shall placed in the First class. All other Successful candidates shall be placed in the second Class.

**Question Paper Pattern**

The Syllabus for each course is divided into ten units, and at least one question shall be set in each unit and the question paper should cover the entire syllabus.

Further, the questions set on the content in the case of optional papers should have a bearing on its teaching aspect.

The question paper, in each paper should have three sections Section–A, Section–B and Section–C.

Section–A shall contain very short answer type questions. With out choice.

Section–B shall contain short answer type question. With internal choice.

Section–C shall contain Essay type question. With internal choice (Either or Type)

**The Format is Given Below:**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Type</th>
<th>Length of Answer</th>
<th>No. of Question to be Attempted</th>
<th>Type of Choice</th>
<th>Marks per Question</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Very Short Answer</td>
<td>Each in about 70 Words</td>
<td>10</td>
<td>No Choice</td>
<td>02</td>
<td>20</td>
</tr>
<tr>
<td>B</td>
<td>Short Answer</td>
<td>Each in about 250 Words</td>
<td>5</td>
<td>Out of 7</td>
<td>05</td>
<td>25</td>
</tr>
<tr>
<td>C</td>
<td>Essay Type</td>
<td>Each in about 750 Words</td>
<td>2</td>
<td>Internal Choice</td>
<td>15</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>17</td>
<td>Grand Total</td>
<td>–</td>
<td>75</td>
</tr>
</tbody>
</table>
The questions to each paper in general shall cover all the units in the syllabus.

Questions testing knowledge, understanding and application shall be given due weightage.

Transitory Provisions: The existing syllabus shall be for a period of three years from the year of implementation.

**Internal Assessment**

The marks obtained by candidate in the internal and external valuations shall be shown separately in the mark list.

There will be no supplementary test for internal Assessment.

Internal assessment marks shall be divided as follows.

**Continuous Internal Assessment**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Criteria for Internal Assessment</th>
<th>Duration</th>
<th>No. of Tests</th>
<th>Distribution of Marks per Paper</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Test</td>
<td>60 minutes</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>II</td>
<td>Assignment</td>
<td>Two weeks</td>
<td>Four per paper</td>
<td>10</td>
</tr>
<tr>
<td>III</td>
<td>Marks for Attendance percentage. (Attendance from the date of commencement of class is compulsory)</td>
<td>60 – 69(2) marks</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>70 – 79 (3) marks</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>80 – 89 (4) marks</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>90 and above (5) marks</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>–</td>
<td>25</td>
<td></td>
</tr>
</tbody>
</table>

The internal marks should be sent to the university before the written examination.

The valued answer papers shall be returned to the students for perusal and then collected back from them, after perusal in the classroom itself. The marks shall be displayed in the department Notice Board. The teachers shall also discuss the answer to question in the class and supply the correct answers. The papers shall be available for review by the University, if necessary.

If a student is not satisfied with the valuation of the paper, he/she may appeal to the Head of the Department within 3 days of the announcement of the marks for consideration such appeals shall be referred to the review cell consisting of the Dean of Faculty, the Head of the Department (Nominated by the Head of the Department other than the teachers involved). If the Head of the Department himself/herself is the course teacher, another senior member of the Department in lieu of the Head of the Department will be nominated to be member of review cell. The marks awarded by the cell will be the final marks.

The candidates desirous of improving the internal assessment marks should undergo the course of study once again after obtaining the prior permission of the university, also at the end of the year, after cancelling the previous appearance of Paper/Papers in the University Examination.
SYLLABUS

COURSE–I

110. EDUCATION IN INDIAN SOCIETY – STATUS, PROBLEMS AND ISSUES

Objectives

The student teacher

- acquires knowledge of the different agencies of education.
- acquires knowledge of the major problem in contemporary Indian education.
- comprehends the goals for the development of education as set out in Indian education.
- comprehends the contemporary social economic and political environment with reference to the educational system.
- understands the significant role played by teachers as agents of social change in India.
- develops an understanding of the contemporary social and educational problems in the school.
- appreciates the divergent philosophies of education and their implications.

COURSE CONTENT

Unit–I

Relationship between philosophy of life and education.

The meaning of philosophy of education its significance of education.

Indian and Western philosophies of Education.

Indian schools – Vedanta – Bhagavat Gita – Jainism – Buddhism.

Unit–II


Unit–III

Educational thought as exemplified by following educators: Vivekananda, Gandhi, Tagore, Sri Aurobindo, Rousseau, Froebel, Dewey, Pestalozzi, Montessori and Zahir Hussain and J.Krishnamurti.

Unit–IV

Education in the Indian Constitution.


Agencies of Education

a) Home, community and mass media

b) Continuing education and the concept of Open University system.

Unit–V

Unit–VI
1) Modernisation of Indian Society, its significance for education – instrumental factors like Universalization and democratization of education.

2) Teachers role in society
   a) Indian society in transition, impact of socialism, secularism and globalization.
   b) Teachers as social workers, teachers role in
      i. Pupil development
      ii. Community development
      iii. National integration
      iv. International Understanding
      v. Elimination of social tensions and conflict
      vi. Education for global peace.

Unit–VII
Problems in Indian Education.
   i. Language problem
   ii. Primary Education – compulsory Education, equalization of educational opportunities, students unrest, Moral Instruction, Employment opportunities, wastage and stagnation, DPEP and Sarva Shiksha Abhiyan (SSA).
   iii. Secondary Education – work Experience, Co-Education, Supervision and Inspection.

Unit–VIII : Language Education

Unit–IX
1. Higher Education

2. Teacher Education
   Training for primary, secondary and higher secondary course. In-service programme - code of conduct for teacher.

Unit–X
Health and Hygiene: Definition of Health – Health requirements – General method of sanitation.

Health Instruction: Health Services and Health Supervision in Schools – Importance of personal Hygiene.
Unit–XI
1. Population Education
   Population trends in India, Impact of Population growth on social economic and educational development, correlating school subject with population problems.
   Environmental Education – Meaning, its scope, Instructional objectives of Environmental studies at the primary, secondary and tertiary levels – Environmental pollutants – factors affecting environment.
2. AIDS Awareness
   Need and Importance-Causes – Problems and Prevention.

Reference Books
4) GrCwal and Gupta B.S Working with Community and Teacher Education, Bhopal: Modern Book Depot.
8) Naik, J.P Selection form Educational records (New Series Vol.. I Development of Educational Service)
9) Carenji, S Distance Education, New Delhi :Sterling publishers.

COURSE–II
120. PSYCHO – PEDADOGY

Objectives
   The student teacher
   ▪ acquires knowledge of the basic concepts of psycho – pedagogy.
   ▪ understands the concepts of Psycho – Pedagogy
   ▪ applies the principles of psychology of the teaching and learning.
   ▪ develops skill in the Psychological Testing.
develops interest to know more about psychological concepts related to teaching and learning.

- develops positive attitude towards psychological approaches to the teaching and learning.
- appreciates the contribution of psychology in the class room situation.

**COURSE CONTENT**

**Unit–I**


**Unit–II**

Growth and development of early childhood, later childhood and adolescence – difference between growth and development dimensions.

- Physical development
- Mental development
- Emotional development
- Social development
- Moral development
- Personality development


**Unit–III**

The scientific study of the child and adolescence - the method and techniques of study – Introspection, observation experimental, case study, differential, clinical and Anecdotal.

**Unit–IV**


**Unit–V**

Sensation, Perception – Attention – Imagination, Thinking, Reasoning, Cognitive development – concept formation.

**Unit–VI**

Intelligence-meaning, definitions, theories – Spearman’s two factor theory, multifactor theories, Group factor theory, Guilford’s structure of intellect, Gardeners multiple intelligence and emotional intelligence - Measurement of Intelligence: verbal, Non-verbal and performance tests. Uses of intelligence tests – Aptitude its measurement – Attitude and its measurement.

**Unit–VII**

Motivation in learning – meaning of motivation, intrinsic and extrinsic motivation – Theories of motivation. Learning – Meaning, internal and external conditions of learning – Theories of learning – Thorndike, Pavlov, Skinner, Kohler,
role of motivation in learning, learning curve, Transfer of learning – Memory – Types – Improvement of memory – Forgetting – Causes – Treatment.

Unit–VIII
Personality – Meaning, definition, classification, Theories of personality: Freud, Jung, Adler, Allport, Maslow Rogers and Stagner.
Assessment of personality – subjective, objective and projective techniques.

Unit–IX

Unit–X
Mental health – meaning and importance mental hygiene-frustration and conflict – defence mechanism – promotion of mental health guidance and counselling – concept, definition and principles.

Practical Work
To be conducted on children/adolescents
1) Span of Attention
2) Concept formation – Sensory motor test
3) Transfer of Learning.
4) Memory for meaningful and meaningless stimuli.
5) Attitude towards teaching (any one scale)
6) personality test(any one)
7) Interest Inventory
8) Creativity test
9) Aptitude tests
10) Intelligence tests

Reference Books
1) Allport, G.W., Personality – A Psychological Interpretation, Constable Co.Ltd. London, 1927

COURSE–III
130. CURRICULUM DEVELOPMENT

Objectives
The student teacher
  ▪ acquires the knowledge of the terms and concepts used in curriculum development,
  ▪ understand the principles, design, development and evaluation of curriculum.
• applies the knowledge in analyzing the different types of curriculum and their evaluation.
• develops skill in preparing curriculum design.
• develops interests in studying books, journals and articles on curriculum development.
• develops a desirable positive attitude towards curriculum development.
• appreciates the contribution of curriculum development in the class room situation.

**Unit–I**
Curriculum – Meaning – Definition – Scope-Curriculum as a plan, as experience, a subject matter or content – Nature and scope.

**Unit–II**
Foundations of curriculum development – Philosophical, Sociological and Psychological.

**Unit–III**

**Unit–IV**
Curriculum Process – Formulation of objectives, selection of learning experience and content organization.

**Unit–V**

**Unit–VI**
Representative curriculum design – subject centered design, Learner centered design, experience centered design, Life situation design.

**Unit–VII**
Curriculum Transaction – Concept of Teaching and Learning, Relationship – Constituents – Effective Teaching and Learning.

**Unit–VIII**

**Unit–IX**
Agencies of Curriculum development – School, Teachers, Principals, Educationists. NCERT, SCERT, NCTE, UNESCO, DTERT.

**Unit–X**
Future directions for curriculum development. Approaches to forecasting new curricular areas.
Reference Books


COURSE–IV : ELECTIVE

141. PRE-PRIMARY EDUCATION

Objectives

The student teacher

- acquires the knowledge of
  - a) child development and its principles
  - b) the child’s aspiration, attitudes, aptitude, abilities, interest and personality
- understands
  - a) the theoretical concept pertaining to pre-primary education.
  - b) the procedure for the development of activity centred curriculum for pre-primary education.
- applies the modern techniques of teacher preparation.
- develops skills to plan specific programme and organize pre-primary education suitable to Indian condition.
- develops interest to know the needs and problems of pre-primary children
- develops positive attitude to tackle the problem of pre-primary education in India.
- appreciates the contribution of educationists to pre-primary education in India.
COURSE CONTENT

Unit–I

Unit–II
Needs of children – primary, secondary, health and nutritional needs. Psychological, emotional and special needs – motivational factors of behaviour.

Unit–III
Problems of children – Adjustment problem – Problems with exceptional children – physically handicapped, the backward, the gifted, their needs and satisfaction.

Unit–IV
Nursery Education – importance, objectives, types, (Rural, Balwadis, Balamandirs, Montessori School, Kindergarten, Pre-basic)

Unit–V
Principles involved in planning programme Storytelling, play activities, language work, number work and creative work – Factors influencing daily schedule personal hygiene, environment and sanitation.

Unit–VI
Curriculum Determinants
The role of love and affection in the education of pre-school children – Study of aspiration, attitudes, abilities, interest and personality of pre-school children.

Unit–VII
Staff – special qualities for teaching of child, qualifications, teacher – pupil ratio – Building and equipment site, special designs suitable for pre-primary education center – furniture for play activities (indoor and outdoor) arrangement maintenance and upkeep.

Unit–VIII
Registers, record and reports for Nursery school children – Anecdotal records, health records, cumulative records – case study.

Parent – teacher relationship the need for Co-operation methods for securing Co-operation meeting, home visit, interview, festivals, exhibition mother’s day.

Unit–IX
Planning the nursery school programme
Long – term planning, short – term planning, evaluation – Programme for the whole year, for the three year old, four old and five year old.

Unit–X
Pre-Primary education movement in India, contribution of Tagore and Mahatma Gandhi – Pre-primary education in other countries, contribution of Comenius, Rousseau, Froebel and Montessori.
Practical Work
1) Collection of 5 stores and 5 nursery rhymes.
2) Visits to a Nursery school and preparing a school profiles.

Reference Books
1) Aggarwal, J.C., History and Philosophy of Nursery Education, Doaba House, Delhi.
2) Aggarwal, J.C., Methods and Materials of Nursery Education, Doaba House, Delhi.
4) Dr. Bhrati Mohapeatra, Going to School in the Raj Primary Education in India (1803) with Focus on Orrissa.
8) Jerome, Leavitt, Nursery Kindergarten Education.
9) Hurlock Elizabeth, Developmental Psychology, Tata McGraw Hill Ltd, New Delhi
11) Mark J. Backer, Introduction to Exception Children.
13) Pankajam, D. Pre-primary Education.
14) Pluckrose Hentry, Children in Primary School Harper and Row.
17) Shanta Narulkar, Pre-basic Education.
18) William M. Crncekshenk, Education of Exceptional Children, Prendce Hall Inc.

COURSE–IV : ELECTIVE
142. VOCATIONAL EDUCATION

Objectives
The student teacher
- acquires knowledge of the various aspects of vocational education in India.
- understands.
  a) the development of vocational programme in India with those in U.S.A. Russia, U.K and Japan.
  b) the significant role of vocational education in increasing productivity.
- develops proper attitude towards vocational education.
- appreciates the significant changes in the filed of vocational education in India.
COURSE CONTENT

Unit–I

Unit–II
Vocational education at Higher Secondary stage-objectives, course of study – list of vocations – syllabus, scheme of examination allocation of period – qualification and training of teachers for vocational education. Problems and suggestions for improvement of vocational education – Models of Vocational Education – School Model, Dual Model, Mixed Model.

Unit–III
Historical background: committee and commissions.

Unit–IV
Work experience-concept – distinction between work experience and vocational education.
Basic education – concept – merits – Criticism, need and importance, scheme of multipurpose schools.

Unit–V
Technical institution in Tamilnadu – ITI and polytechnic-need and importance-classification, admission process – course of study – organization and administration at state level – vocational guidance-need and importance-vocational fitness and appraisal.

Unit–VI
ITI, Polytechnics and para professional courses – salient features co-operation with industries and other organization – Apprenticeship Act 1961.

Unit–VII
Vocational education and training, correspondence and continuing education – need and importance-in service programme-training for self – employment and small scale industry.

Unit–VIII
The role of the center and state government regarding vocational education and training. AICTE-ICAR, CSIR, SBTE and NCERT – their functions.

Unit–IX
Vocational education and economic development – vocational education in five year plans.
Unit–X

Vocational and Technical education in U.S.A., UK, Russia and Japan.

Practical Work
1) Visits to places of any one of the small scale industries / polytechnics / employment exchanges.
2) Administer occupational Reference Books inventory and report it.

Reference Books
3) Secondary Education Commission (1952 – 53)

COURSE–IV : ELECTIVE
143. EDUCATIONAL MANAGEMENT

Objectives
The student teacher
- acquires knowledge of the basic concepts in Educational Management
- understands the Concepts of Educational Management.
- applies the principles of administration in actual school situation.
- develops skill pertaining to educational management
- develops interest to know more about the concepts in educational management relating to school organization.
- develops positive attitude towards educational management approaches in the school.
- appreciates the contribution of educational management in the school situation.

COURSE CONTENT

Unit–I

Basic principles of modern management theory – totalitarian versus democratized – classical theory, the structural theory, socio – technical system theory – relevance to educational administration.

Principles of good administration – development and maintenance aspects.

Administrative behaviour and styles.
Unit–II
Leadership behaviour and educational administration – leadership behaviour – implication for educational administration – deterrents of the educational leadership.
Role of the Head of the Educational institution, different styles of leadership.

Unit–III
Educational supervision – meaning and scope. Need for supervision, aims – Distinction between supervision and inspection.
Types of supervision – Based on goals to be attained – American system of classification – Comparison.
Methods of supervision – group techniques – study group – basic research workshop

Unit–IV
Qualities of supervision: Inspection Functions of Inspection – Inspection in Tamilnadu.

Unit–V
Administration of education at different levels in our State-Teacher Education, Adult Education, Non-Formal education.

Unit–VI
Role of the center and state-constitutional provision, local bodies and private enterprises.
Role of UGC, NCERT, SCERT, CABE and Association of Indian Universities.

Unit–VII
School Administration – scope and meaning, role of the Headmaster and teacher in school administration, school discipline-meaning of discipline-principles of punishments – means to achieve good discipline-corporal punishment.
School library, functions of the school library – requisites of good library, Motivating pupils to utilize library.

Unit–VIII
Organisation of Co-curricular activities – Need and importance, guiding principles for effectiveness.
Some important Co-curricular activities – school assembly – athletics and games – clubs and societies – role and organization of each.

Unit–IX
Unit–X

Issues in educational administration, centralization and decentralization, autonomy and academic freedom – students participation in the administration, state and private enterprise.

Practical Work
1) Preparation of institutional planning for a school.

Reference Books
2) Cannobell, Corbally, *Introduction to Educational Administration*, and Ramasayer Boson Allan and Bacon Inc.

COURSE–IV : ELECTIVE
144. NON-FORMAL EDUCATION

Objectives
The student teacher
- acquires the knowledge, principles and concepts in Non-Formal Education.
- develops understanding about the structure, types, system and functions of Non-Formal educational programmes
- applies the principles and polices in the organization of Non Formal Education.
develops the skill of preparing Non Formal Education programmes, learning materials and using teaching techniques.

develops the interest in knowing the programmes of Non-Formal Education.

COURSE CONTENT

Unit–I

Non-formal education, concepts, definitions need, aims and objectives, development and progress – non-formal education programmes in India – Social Education.

Unit–II

Difference between formal, informal and Non-formal education. Co-operative enterprise-psychological principles underlying Non-formal education.

Unit–III

Non-formal for neo-literates – types of programs for different age group 6 – 14, 15 – 24 and 24 onwards – programmes for rural, urban and tribal groups.

Unit–IV

Functional literacy – scope and definition – different approaches, methods of teaching, reading and writing, adult tutorials, monitoring.

Unit–V

Programme for youth – objectives, organization and structure, programme for youth within the formal educational setting and in and out-of school setting in rural, urban and tribal context – occupation orientation.

Unit–VI

Non-formal education for drop – outs and non starters – Introduction of SSA – orientation problem and environment oriented curriculum for different categories.

Unit–VII

Non-formal education programme for women – objectives, types, vocational training and extension service education, role of voluntary agencies and women’s organizations.

Unit–VIII

Non-formal education for workers – objectives, types of programmes for improving skills and competencies. Impact of Non-formal education in economic and industrial growth.

Unit–IX

1) Management of Non-formal education programs at the micro – level – need, assessing facilities, social and educational factors affecting at the micro level management.

2) Financial resources – utilization of human, financial resources needed – in the organization of micro level programmes.

Unit–X

Evaluation of Non-formal educational programmes – special techniques needed.
Practical Work
1) Preparation of one radio lesson and two songs on Non-formal education.
2) Script writing for one drama and one conversation on Non-formal education.

Reference Books

COURSE–IV : ELECTIVE
145. COMPUTER EDUCATION

Objectives
The Student Teacher

- acquires knowledge of the fundamentals of computer, Operating system software, office software, different types of memory devices and so on.
- Understands the differences between the MS DOS and Windows operating systems and Office applications
- applies the knowledge of office application software in preparing word document, excel work sheet and power point slides.
- develops skill in preparing a power point presentation, using word software for class room teaching and so on.

COURSE CONTENT
Unit–I : Roots and Rudiments of Computer
Historical evolution of computers -Generations of Computers – Types of computers, Characteristics of a digital computer – Fundamental components of a computer – Types of Memory – Low level and high level languages.

Unit–II : Introduction to Operating Systems
Meaning –concept – types of operating systems – Basics of Microsoft disk operating system – Working with MS Windows and its associated commands and applications.

Unit–III: Microsoft Office (WORD, EXCEL)

**Unit–IV : Microsoft (POWER POINTS, ACCESS)**


**Unit–V : Learning Through Computer**


**Unit–VI : Curriculum of Computer Science**

Developing curriculum materials for computers – Steps, principles, Pedagogical design, criteria for good computer curriculum implementation Evaluation.

**Unit–VII : INTERNET and its Applications**


**Unit–VIII : WEB Education**


**Unit–IX : Basics of Electronic Infections**


**Unit–X : Computers in Education**

Different applications of computer in education – Computers in teaching and learning – Concept of e-learning – Computer based evaluation – Computers in educational administration.

**Reference Books**

3) http://www.cotse.comltools/steqa.htm
4) http://www.steqanos.com
9) Vezina, R. The Internet Civilization: Alienation or Liberation? (Forces, 124.1999)

**COURSE-IV : ELECTIVE**

146. GUIDANCE AND COUNSELLING

**Objectives**

The student teacher

- acquires knowledge of the basic concepts of guidance and counselling
- understands the concepts of guidance and counselling.
- applies the principles of guidance and counselling to the teaching and learning.
- develops skill in organizing and conducting guidance service in schools
- develops interest to know more about guidance and counselling concepts related to teaching and learning.
- develops positive attitude towards guidance and counselling approaches to the teaching and learning.
- appreciates the contribution of guidance and counselling in the class room situation.

**COURSE CONTENT**

**Unit-I**

Guidance and counselling – concept, definition and scope of guidance in education.

**Unit-II**

Historical background of guidance and counselling movement – its present day importance-guidance and counselling in secondary schools in India.

**Unit-III**

Principles of guidance-views of Jones, Leferer, Turrel and Weitrel – individual differences – All round development, purpose of guidance.

**Unit-IV**

Need for guidance-objectives of guidance-kinds of guidance-educational, vocational personal and social.

**Unit-V**

Personal guidance-Concept of needs, Psychology of adjustment – guidance to meet the needs and adjustment – Deviant beahaviours and guidance of exceptional children.

Educational guidance-problems of the present day curriculum, facilities, teacher – guidance for solving educational problems.
Vocational guidance – the world of vocations – requirement and problems, career guidance, technique of placement.

**Unit–VI**
Counselling – Goals – Process – techniques – Client Counsellor Relationship, Teacher as a counsellor.

**Unit–VII**
Types of counselling – views of Rogers and Wallen, Directive and non directive counselling, eclectic counselling; student counselling; placement counselling; group counselling.

**Unit–VIII**
a) Information for guidance and counselling Tests Academic achievement, intelligence, attitude, aptitude–students – individual records.

b) Techniques for gathering data – observation, interview, sociometry, role play & case study.

**Unit–IX**
The counsellor, functions of a counsellor – views of Jones, keller, Rogers, Wallen Blum and Balinsky – characteristics of a counsellor – preparation and training.

**Unit–X**

**Practical Work**
1) Preparation of an interview schedule to be used with school students.
2) Construction of diagnostic tests

**Reference Books**
3) Arbuckle Dugland, *Counselling in the Classroom*, Allyn & Bacon Inco.

**COURSE–IV : ELECTIVE**

147. POPULATION EDUCATION

**Objectives**

The student teacher

- acquires the knowledge of the basic concepts and terms of population education.
- understands the developments taken place in the field population education in India.
- applies the thoughts of population policy of a country to the teaching and learning.
- develops interest to know more about consequence and effects of population growth.
- develops positive attitudes towards family planning programmes.
- appreciates the contribution of small family norms for the growth and progress of family, society and country.

**COURSE CONTENT**

**Unit–I : Introduction of Population Education**

Meaning, concept, definition, scope and need for population education. Development of population objectives of population education in India: Population education Vs Sex Education and Family Planning Education.

**Unit–II : Programmes of Population Education in India**

National and State levels – Bucharest conference and its implications in national population policy in India. National population education project.

**Unit–III : Population Dynamics**

Determinants of Population change. Fertility (Birth) Mortality Death) and Migration. Population trend in the work in Asia, in India, and in the states. History on population growth in India. Factors responsible for rapid population growth in India; prospects for future growth in India.

**Unit–IV : Population Growth and Social Development**

Social structure, relationship and behaviour, crimes, social evils and social injustice. Status of women, role of culture and religion, population change and marriage pattern and practice, sex p reference books.

**Unit–V**

Population Growth and Educational Development

Quality of education. Adult education, Vocational education, Non-formal education and population education.
Unit–VI: Population Growth and Economic Development

Population growth and labour supply, employment growth: GNP Disparities income and wealth in developing countries like India, poverty, causes and consequences.

Unit–VII: Family Planning Education

Small family norm – planned parenthood – need, importance and measures – Agencies, Institutions, offering services in family planning, alternative strategies and incentives in family planning programmes; family planning programme in India.

Unit–VIII: Environment, Health and Hygiene

Importance of proper and healthy natural environment – conservation of natural resources.

Under nutrition, malnourishment, deficiency diseases, health aspects (Curative, Primitive and preventive), personal Hygiene; Nutrition education, need and importance.

Unit–IX: Population Education in Schools and Teacher Training Colleges

Curriculum and Methodology. Integrated specialized approach. Co-curricular activities, role of teachers, issues and problems in the introduction of population education, pre-service and in in-service training, knowledge and attitude of teachers.

Unit–X: Population Education in India

Role of home, school, mass media in population education; Research in population education in India, studies and survey – based research. National and international agencies engaged in the field of population education.

Practical Work
1) Preparation of one aid in any two of the following
3) Scrap book (clippings from Newspapers, periodicals, Journals etc. relating to population, Brochures – published by the Government towards demographic education).

Reference Books


12) Narayana Menon, The communication Revolution–India the Land and the People, National Book Trust, India.


---

**COURSE–IV : ELECTIVE**

**148. ESSENTIALS OF TEACHING AND LEARNING**

**Objectives**

The student teacher

- acquires the knowledge of the concepts, terms and procedures in the essentials of teaching and learning
- understands the concepts, terms and procedures in the essentials of teaching and learning
- applies the knowledge to innovative practices of learning
- develops skills of using different instructional media
- develops interest in knowing recent developments in educational technology
- develops scientific attitude towards teaching and learning
- appreciates the contribution of technology to the teaching and learning

**Unit–I : Concept of Teaching**

Definition – variables in teaching – Relationship between teaching and Learning

Teaching model – Concept and Classification

Teaching skills – Concept and Classification
Unit–II
Principles of teaching – General principles of teaching, Psychological principles of teaching – Maxims of teaching.

Unit–III : Strategies of Teaching

Unit–IV

Unit–V : Instructional Objectives
Various approaches of writing, learning objectives in behavioral terms with special Reference to I) Blooms taxonomy ii) Advance curriculum Model of cognitive learning by Dave (ACMCL) iii) the RCEM system and iv) Guilford’s Intellectual model.

Unit–VI : Educational Technology

Unit–VII : Innovative Practice of Teaching
Team teaching – Block teaching – programmed learning – personalized system of instruction (P.S.I) – computer assisted instruction (C.A.I).

Unit–VIII : Mass Media in Educational Technology
Knowledge of hardware-Radio, ETV, OHP, Tape Recorder, Slide, Projector, filmstrip. CCTV, VCR, VCP etc. Uses of the Mass Media in classroom software and hardware.

Unit–IX
Content analysis, task analysis – criterion referred tests and normative tests.

Unit–X
Research, innovations in Educational Technology in India.

PRACTICAL WORK
1) Arrange the steps of CAI – for any one concept.
2) Prepare any two transparencies/Slides for using Projector in any one of your optional subjects.

Reference Books
4) Flanders, H.D., Analysing Classroom Interaction, Addison Wesley, London.
6) Jangira, N.K., Core Teaching Silk Microteaching Approach, NCERT, New Delhi, 1983.

**COURSE–IV : ELECTIVE**

**149. ADULT EDUCATION**

**Objectives**

The student teacher
- acquires the knowledge and skills in programmes for adults.
- understands the concept of Adult Education
- understands the national policies and programmes of Adult Education in India.
- understands the different approaches to adult and Non-formal education.
- develops the skills in training and organizing education functionaries: and
- develops the skills in organizing the adult education programmes at the village levels and at the project level

**COURSE CONTENT**

**Unit–I**

Concept and meaning of adult education, need for adult education, difference between literacy and functional literacy. Formal, informal and Non-formal education. Differences in the traditional and functional literacy programmes.

**Unit–II**

Adult literacy – its origin, development and growth during 19\textsuperscript{th} and 20\textsuperscript{th} centuries with specific reference to adult literacy in India.

**Unit–III**

Computers in adult education – awareness, functionality and literacy, total approach for development.

**Unit–IV**

Characteristics of adult learners – psychology of adult learners, analyzing adult need, motivating adult for education, use of various media for adult education.

**Unit–V**

Adult Educator’s training – project structure methodology for the training of the instruction training of project officers – need – oriented training based on the requirements of the area where they are to work.

**Unit–VI**


Different methods of teaching adults: Audio – visual aids and their use in adult education.
Unit–VII
Agencies involved in the functional literacy programme-Workers Education – Role of Universities in the present context of Adult Education (Area Development Approach.)
Role of Voluntary agencies and State Resource Centres in conducting Adult Education Programme.

Unit–VIII
Adult education – project formulation – procedures and actual formulation and screening of the project.

Unit–IX
Evaluation and follow – up – evaluation of functional literacy programme. Programmes for neoliterates, organizing libraries, Jana Shikshan Nilayams and Centres for Continuing Education.

Unit–X
National Adult Education Programmes, (NAEP) role of NSS, NYK and Shramik Vidya Peeths, Nehru Yunak Kendra (NYK).
National Literacy Mission – objectives, role of student and Non-student, youth in National Literacy Mission, Area Development Approach for adult education programmes.

Practical Works
1) Preparation of the literacy profile for a village.
2) Devise a tool for evaluation work.

Reference Books
3) Devadas, R.P., Planning and programme for Adult Education, University of Madras, 1979.1
5) Jayagopal, R., Adult Learning Psycho – Social Analysis in Indian Context, Department of Adult and Continuing Education, University of Madras, Chennai, 1985.

Journals
2) IAEA Newsletter, Indian Adult Education Association, New Delhi.
OBJECTIVES

The student teacher

- acquires knowledge of the concepts, terms and procedures in environmental education.
- understands the concepts, terms, and procedures in environmental education.
- applies the knowledge in actual classroom situation.
- develops skill in various activities pertaining to teaching and learning.
- develops interest in knowing recent developments in environmental education.
- develops scientific attitude towards teaching and learning.
- appreciates the contribution of the subject to the teaching and learning.

COURSE CONTENT

Unit-I


Unit-II


Unit-III

Epidemiology – definitions – air borne-water borne-food borne-vector borne disease-diseases from animals to man – control and prevention – sanitation.

Unit-IV

Air pollution – definition – sources and magnitude-types of pollutants – effects on plants, animals and men, preventive and control measures.

Unit-V

Water pollution – pollution of inland waters marine waters, brackish water and ground water – sources, types of pollutants – effects on plants, animals and man – prevention and control measures.

Unit-VI

Land pollution – pollution of land soil – types of pollutants – use of fertilizers and pesticides effects on plants, animals and man – preventive and control measures.

Unit-VII

Noise pollution – meaning, measurement of noise sources – effect on human being preventive and control measures.
Unit–VIII


Unit–IX


Role of mass media in environmental education.

Unit–X

Environmental awareness through government and Non-government organisations certain peoples movement in India against environmental degradation, like Narmada – Tehri Dam Silent Valley Project.

Practical Work

1) Preparation of one poster from any one of the following.
   a) Nature of balance
      i. Forest    ii. Pond    iii. Sea
   b) Food web
   c) Bio-diversity
   d) Energy cycle

2) Submit a report on the current environmental issues of a village.

Reference Books


4) Duraisami (1970) *Environmental Education in curriculum of Indian Schools.* School Science vol. no.3, (Geography of Indian resources and regional development, NCERT, New Delhi.)


6) The Curriculum for the ten years school and frame work (1975) NCERT, New Delhi.


8) *The state of India’s Environment* (3 Volumes) Centre for Science and Environment, New Delhi.

9) *Environment Science,* Truck and Wittes, W.S.Saunders So; London.

OBJECTIVES

The student teacher

- acquires the knowledge on principles and concepts in Teacher Education in India and abroad.
- develops understanding of the structure, types and problems in the implementation of teacher Education programmes
- develops interest in knowing the problems involved in the organization of teacher education programmes at different level
- applies the principles, policies and practices in the preparation of teachers.

COURSE CONTENT

Unit–I

Teaching as a profession – teacher education as distinct from teacher training – Need for teachers education – Objectives of Teacher Education..

Unit–II

The concept of teaching – effective teaching contributory factors – characteristics of teachers.

Unit–III

Objectives of teacher education – Pre-service teacher education – Historical perspective, different types of teacher education institutions – General and stage wise

Unit–IV


Unit–V

Evaluation of teaching Competency – concept criteria construction and description of rating scales students evaluation of teachers.

Unit–VI


Unit–VII

Administration of Teacher education in Tamil Nadu – Role of state Board of Teacher Education – Universities – Tamil Nadu Teachers Education University and NCTE. Secondary Teacher Education in Five year plans.

Unit–VIII

Status of teachers – preparations for profession – code of conduct. advancement and promotion, professional organization of teachers – nature, scope functions, problems and requirements.

Unit–IX

Organisation of comprehensive colleges of education – advantages objectives of good teacher education programmes, SUPW in education – meaning objective, activities and advantages.
Unit–X

Practical Works
1) Organizing the school administration profile.
2) Listing the expected responsibilities from the teaching community by using an appropriate tool for the purpose.

Reference Books
4) ICSSR, In Service Education for Teacher Education, New Delhi, 1968.

COURSE–IV : ELECTIVE
179. HEALTH, YOGA AND VALUE EDUCATION

Objectives
The student teacher

- acquires knowledge of the basic concept of well being and the Human Body systems.
- understands the aim of yoga, branches of yoga and yogic view of human being.
- applies the yoga and meditation to life situations and the principles to the teaching and learning.
- develops interest to know more about values, Yoga and health, Concepts related to teaching and learning.
- develops positive attitude towards value Orientation Programme in schools.
- appreciates the values inculcation in the classroom situation.

COURSE CONTENT
A. Health
Unit–I
The concept of Well– being
Physical, Mental – Emotional and Social well being.
Unit–II
Human body and its systems – in brief.

Unit–III
Yoga – Introduction – Meaning – Aims – As a Science and an Art.

Unit–IV
Branches and Elements of Yoga, Jnanan Yoga, Hatha yoga, Bhakti Yoga, Mantra Yoga, and Karma Yoga.

Unit–V
Ashtanga Yoga. – The eight limbs of Ashtanga Yoga, – Yama, Niyama, Asana, pranayama, Pratyahara, Dharan, Dhyanan and Samathi.

Unit–VI

Unit–VII
Yoga and meditation – Importance in life situations – and in School Education.

Unit–VIII
Values – Concept – Meaning, Classification, importance of Values
In school, Recommendations of Education Commission on Value Inculcation.

Unit–IX

Unit–X
Value Inculcation – Means and Approaches – Curricular, Co-Curricular and Extra Curricular programmes.

Practical
1) (a) Demonstration of any two Yoga as an as
(b) Report of a Visit to a health center
2) Identification of value components from any school text books.
3) Prepare procedure for practicing atleast 5 yogasanas, Pranayamas, Suriya Namaskarams – related to school children.

Reference Books
1) Lydia Feruendes, A.C. and Clare, Integrated Approach to Value Education, Mangalore Assist Press.

**COURSE–IV : ELECTIVE**

**180. HUMAN RIGHTS EDUCATION**

**Objectives**

The Student Teacher

- acquires knowledge of the basic Concepts in Human Rights Education.
- understands the Concepts of Human Rights Education.
- applies the principles of Human Rights Education in day to day life.
- develops skill relating to Human Rights in real life situation.
- develops interest to know more about the Concepts of Human Rights.
- develops positive attitudes towards Human Rights.
- appreciates the Contribution of Human Rights Education to the Society.

**COURSE CONTENT**

**Unit–I**

Human Rights – its meaning – definition and historical background – recent development.

**Unit–II**

Unit–III

Unit–IV

Unit–V
Human Rights Education at primary and secondary levels, need and importance-curriculum transaction and related activities.

Unit–VI

Unit–VII
Rights of Women – Empowerment of women – Hurdles to implement Women’s Rights – Efforts taken by the Government and Non-Governmental organizations.

Unit–VIII

Unit–IX

Unit–X
Rights to information – Types of information – personal, social, economical, political and cultural – ways and means of obtaining information.

Practical work
Practical work related to the theory paper.

Reference Books

**COURSE–IV : ELECTIVE**

189. EVALUATION ELEMENTS OF STATISTICS AND RESEARCH

**Objectives**

The student teacher

- acquires the knowledge of concepts relating to educational evaluation
- understands the classroom tests, tools and scores.
- applies the basic concepts of educational statistics to describe and interpret data.
- develops interest in research as applied to education.
- develops skill in carrying out simple research projects.
- appreciates the contribution of statistics to research.

**COURSE CONTENT**

**Unit–I**

The concept of evaluation – The purpose and place of evaluation in education – Difference between measurement and evaluation – Functions of evaluation – The role of objectives in educational evaluation – Relation between educational objectives, learning experiences and evaluation.

**Unit–II**


**Unit–III**

Types of evaluation – formative and summative-Criterion Reference test and norm Reference test.

**Unit–IV**

Unit–V
Achievement tests – aptitude test – attitude tests – prognostic test – diagnostic test – purpose and use of these tests.

Unit–VI

Unit–VII
Organization of data – frequency distribution – Graphical representations of data – bar diagram, histogram, frequency polygon, cumulative frequency graph and ogive Curves – Measures of central tendency – arithmetic, mean, median, mode, quartiles and percentiles – use and interpretation.

Unit–VIII
Measures of variability – range, quartile deviation, average deviation and standard deviation – uses and interpretation.

Unit–IX

Unit–X
Scope and need for research in education – outline of a research design. Types of research – Action Research.

Reference Books
4) Gronlund, N.E., Stating Behavioural objectives for Class Room Instruction, 1970.
8) Best John, W. *Research in Education*, Prentice Hall of India. New Delhi, 1989,
9) Barnes John, B. Educational Research for Class Room Teachers.
11) Sindhu, Kulbir Singh, Methodology of Research in Education.
COURSE–IV : ELECTIVE
192. EDUCATIONAL TECHNOLOGY

Objectives
The student teacher
- To enable the student teacher to understand the meaning, nature, scope and significance of Educational Technology and its important component in terms of Hardware and Software.
- To help the students teachers to distinguish between communication and instruction so that they can develop and design a sound instructional system.
- To acquaint student teachers with levels, strategies and models to teaching for future improvement.
- To enable the student teachers to understand about the importance of programmed instructions and researches in Educational Technology.
- To acquaint the student teachers with emerging trends in Educational Technology along with the resource centres of Educational Technology.

COURSE CONTENT

Unit–I : Concept of Educational Technology
- Meaning, Nature, Scope and Significance of Educational Technology
- Components of Educational Technology: Software, Hardware.

Unit–II : Communication and Instruction
- Components, Types, Classroom Communication, Mass Media Approach in Educational Technology. Designing instructional System
- Formulation of instructional objectives.

Unit–III : Teaching Strategies
- Teaching levels, Strategies
- Memory, Understanding and Reflective levels of Teaching
- Modification of Teaching Behaviour
- Micro teaching, Flander’s Interaction Analysis, Simulation.

Unit–IV : Individualized Instructions
- Programmed instruction (linear/branching model)- origin and types – linear and branching.
- Computer Assisted Instruction
- Researches in Education Technology.
- Future Priorities in Educational Technology.

Unit–V : Emerging Trends in Educational Technology
- Radio, Tele-conferencing, CCIV, CA!, Internet, Online education INSAT problems of new Technologies.
- Use of Educational Technology in Evaluation.
- Resource Centres for Educational Technology, CIET, UGC, IGNOU, State ET Cells, etc. their activity for the improvement of teaching learning
Unit–VI : Research and development in Educational Technology
- Educational Technology and new information Technologies.
- India as a knowledge society.
- Applications of information Technology in Education.

Unit–VII : Educational television
- Use of Television in Education
- Evaluation of television lessons
- Integration of EIV & VCR into classroom instruction

Unit–VIII : Instructional Kits
- Media packages, projects
- Instructional designs using audio, video Cassette, T.V. and the Internet.

Unit–IX : Systems Approach
- Definition of system – systems approach Vs. Contingency approach
- Phases of systems approach
- Principles of systems design and flow chart.

Unit–X : Educational Technology and the Teacher
- Role of the teacher Vis-a-vis educational technology.

Reference Books
COURSE–IV : ELECTIVE
193. DISASTER MANAGEMENT EDUCATION

Objectives
The student teacher

- Acquires the knowledge, principles and concepts in Disaster Management Education
- Understands the types, system, and functions of Disaster Management Education
- Develops skills in preparing Disaster Management programmes, learning materials and using teaching techniques
- Develops interest in knowing the programmes of Disaster Management
- Develops desirable positive attitude towards Disaster Management.

COURSE CONTENT

Unit–I

Unit–II
Types of Environmental Hazards and Disaster – Natural Hazards and Disasters – Volcanic Eruption – Earth Quake – Cyclones – Floods – Droughts, Tsunami – Causes effects and Environmental Impacts.

Unit–III

Unit–IV
Approaches to Disaster Risk Reduction – Preparedness – Predictability and Warning – Mitigation – Rehabilitation.

Unit–V

Unit–VI
Disaster Risk Management in India – Hazard and Vulnerability Profile of India.

Unit–VII
Components of Disaster Relief – Water, Food, Sanitation, Shelter, Health and Waste Management.

Unit–VIII

Unit–IX
Role and Responsibilities – Youth and Community Leaders – NGO’s – SHGs – Panchayat Raj Institutions – Urban and Local Bodies – Centre and State Governments in Disaster Risk Reduction.
Unit–X

Disaster Management Act, Policies and Programme in India.

Practical Work

1) A detailed report on any of the disaster, based on web resources.
2) A report based on the functioning of disaster management mechanism in your local area.

Reference Books


COURSE–V(A) : OPTIONAL COURSE

152. INNOVATIONS, TRENDS & APPROACHES IN MATHEMATICS (HSL)

Objectives

The student teacher

- acquires knowledge of the concepts, terms and procedures in the innovations, trends and approaches of teaching mathematics
- understands the concepts, terms and procedures in the innovations, tends and approaches of teaching mathematic
- applies the knowledge in actual classroom situations.
- develops skills in various activities pertaining to teaching and learning.
- develops interest in knowing recent development in the innovations, trends and approaches of teaching mathematic
- develops scientific/Positive attitude towards the teaching and learning
- appreciates the contribution of the subject to the teaching and learning.

COURSE CONTENT

Unit–I


Unit–II

History of Mathematics – Need and importance-contributions of Newton, Causs, Lobochevosky Aryabhatta, Brahmagupta and Ramanujam.
Unit–III

Unit–IV
Models of teaching – significance of models – components. Models developed by Bruner, Ausubal and Suchman – advantages and disadvantages.

Unit–V
Principles of Unit plan, components – characteristics of good unit plan in Mathematics.

Unit–VI

Unit–VII

Unit–VIII
Types of assignments in Mathematics – significance-Characteristics of good assignments.

Unit–IX
Review of units – need and importance-characteristics of a good review of a mathematics lesson.

Unit–X
Need for research in mathematics education – problem in teaching – learning process of mathematics – outcomes of research.

Reference Books
1) Ball, W.N.R., *A Short History of Mathematics*.

COURSE–V(A) : OPTIONAL COURSE

153. INNOVATIONS TRENDS AND APPROACHES IN TEACHING OF PHYSICS (HSL)

Objectives
The student teacher
- acquires knowledge of the concepts, terms and procedures in the innovations, trends and approaches of teaching physics.
- understands the concepts, terms and procedures in the innovations, trends and approaches of teaching physics.
- applies the knowledge in actual class room situation.
- develops skill in various activities pertaining to teaching and learning.
develops interest in knowing recent development in the innovations, trends and approaches of teaching physics.

develops scientific/positive attitude towards the teaching and learning.

appreciates the contribution of the subject to the teaching and learning.

COURSE CONTENT
Unit–I
The nature and structure of science - Definition – process and product approaches – characteristics.
Values of science teaching: intellectual, utilitarian, vocational, social, moral, aesthetic and cultural.

Unit–II
The method of science, Characteristics and types of scientific assumptions in science-methods of science in Physical and mental aspects.

Unit–III
Psychological basis of science education, Contributions of Piaget – Stages of intellectual growth, Gagne’s Models of sequential learning – Bruner’s model of concept learning – Implication to teaching and learning of science.

Unit–IV
Modern approaches in science teaching Group methods formal and informal methods Seminar – Symposium, Panel discussion – Brain storming – Team teaching.

Unit–V


Unit–VI
Evaluation of science teachers. Rating by peers, students, experts, and observation schedules – Flander’s Interaction analysis.

Unit–VII

Unit–VIII
Diagnosing students difficulties in learning – providing suitable remedial measures.

Unit–IX

Unit–X
Types of assignment – Importance of assignment in learning physics – characteristics of good assignment – Research in Physics Education.
Practical Work
1) Organizing panel discussion
2) Improvisation of science equipment

Reference Books
6) Sharma, R.C., *Modern Science Teaching*, Dhanpat Ra and Sons, New Delhi,

COURSE–V(A) : OPTIONAL COURSE
154. INNOVATIONS TRENDS & APPROACHES IN CHEMISTRY (HSL)

Objectives
The student teacher
- acquires knowledge of the concepts, terms and procedures in the innovations, trends and approaches of teaching chemistry.
- understands the concepts, terms and procedures in the innovations, trends and approaches of teaching chemistry.
- applies the knowledge in actual class room situation
- develops skill in various activities pertaining to teaching and learning
- develops interest in knowing recent development in the innovations, trends and approaches of teaching chemistry.
- develops scientific/positive attitude towards the teaching and learning.
- appreciates the contribution of the subjects to the teaching and learning.

COURSE CONTENT

Unit–I
Values of science teaching, intellectual, utilitarian, vocational, social, moral, aesthetic, and cultural.

Unit–II
The method of Science, Characteristics and types of scientists – Assumptions in science-methods of Science-Physical and mental aspects.

Unit–III
Unit–IV

Unit–V
Individualized Instruction, need and importance-Characteristics, Principles – Programmed instruction – Personalized systems of instruction (PSI) – Computer assisted instruction (CAI) advantages and disadvantages.


Unit–VI
Evaluation of science teachers, Rating by Peers, students, experts – Observation schedules, Flander’s Interaction Analysis.

Unit–VII

Unit–IX
Review of units in chemistry need and importance of reviewing lessons – Characteristic of a good review – Different technique of reviewing a lesson.

Unit–X
Types of assignment to be given. Importance of assignment in learning chemistry – Characteristic of good assignment – Research in chemistry education.

Practical Work
1) Improvisation of science equipment.
2) Assessment of scientific transfer of students of a particular class.

Reference Books
OBJECTIVES

The student teacher

- acquires through knowledge in recent trends and approaches of teaching Zoology
- understands the importance of Zoology teaching and learning in the modern era.
- develops skills in application of Zoological knowledge in day life.

UNIT CONTENT

UNIT I

The science of Biology – historical overview – the great Biologists – serendipity – the significant discoveries and inventions – Zoology and its various branches.

UNIT II


UNIT III

Recent trends in curriculum development – student – subject and environment oriented approaches – curriculum development and improvement practices in India.

UNIT IV


UNIT V

Class room climate-authoritarian – laizee faire and democratic climates – Flander’s Interaction Analysis.

UNIT VI


UNIT VII


UNIT VIII

Diagnosis of student’s difficulties in learning Zoology providing suitable measures.

UNIT IX

Review of units in Zoology, need and importance of reviewing lesson – characteristics of a good review – different techniques of reviewing a lesson.
Unit–X

Types of assignment to be given – importance of assignment in learning Zoology and Characteristics of good assignment.

Research in Biology education.

Practical Work

1) Organization of Symposium on Zoology topic.
2) Select one or two topics from H.Sc., Zoology syllabus – identify the learning difficulties & suggest suitable remedial measures.

Reference Books

1) B.S.C.S., Molecules to Man.
8) Miller & Blaydes, Methods and materials for teaching Biological Science methods in Biology.
10) Munzer and Brand, Teaching Science Through Conversation
16) Uttamkumar Singh, Teaching of Science.
Objective

The student teacher

- acquires the knowledge of "History of History" and its theories.
- acquires the knowledge of current trends in Curriculum change in history education.
- understands the authenticity of history and Historiography.
- applies the various innovative methods of teaching history in the class room situation.
- develops the skill of drawing maps, graphs, Charts, pictures and periodical tables.
- inculcates the research attitude.

COURSE CONTENT

Unit–I

History as a branch of Social Science. The relevance of History in the present Scenario.

Unit–II

Development of History as a field of study – recent trends in the subject. Indian Historians and their contributions to History.

Unit–III

Philosophical Basis of History

1) Philosophy of History – History as an imaginative the reconstruction of the past – History as a branch of Social Science-Social, Political, branch of Economic and Cultural issues raised by History.


3) Approaches to History – Individual oriented – Society Oriented, Cultural oriented.

Unit–IV

Sociological basis of history teaching – Education reports on History Education (Various commissions reports).

Unit–V

1) Curriculum Development in History

2) Curriculum construction in History (Selection, gradation, and organization)


4) Chronology in History – Nature of chronology – Sequence in History, Location, Distance-Duration of Historical events in the perspective of time.

Unit–VI

Methods of teaching – Objective based teaching – Dynamic method – Group discussion Tutorial, Seminar, Symposium and Brain – Storming.
Unit–VII
Instructional methods of individual differences – Programmed learning – Classroom interaction analysis modification of teachers behaviour with special Reference Books to history Teachers.

Unit–VIII
Teaching time sense – Time line, Graphs Charts, Pictures and Maps.

Unit–IX
Innovative practices in teaching of History.
Computer Assisted Instruction – Field Trips – Team Teaching.

Unit–X

PRACTICAL WORK
1) A Project report about any one of the place of Historical importance.
2) Collection of antique materials.

Reference Books
4) Gate, V.D., Teaching of History.
9) Majumdar, R.C., Historiography in Modern India, Bombay, 1979.
13) Vajreswari, A Hand Book for History; Teachers.

COURSE–V(A) : OPTIONAL COURSE

157. INNOVATIONS, TRENDS AND APPROACHES OF TEACHING ECONOMICS (HSL)

Objectives
The student teacher
- acquires knowledge of the innovations, trend and approaches of teaching economics
- understands the concepts, terms and procedures in the innovations, tends and approaches of teaching economics at higher secondary level.
• applies the knowledge of the innovations, trends and approaches in actual classroom teaching situations.
• develops skill in various activities pertaining to teaching and learning at economics
• develops interest in knowing recent developments in the economics curriculum at higher secondary level.
• develops positive attitude towards concepts, terms and procedures of teaching economics
• appreciates the values of teaching economics at the higher secondary stage.

COURSE CONTENT

Unit–I
XI and XII Economics syllabus prescribed by Government of Tamilnadu form time to time with Reference Books to the following aspects.

Unit–II
Instructional objectives – Development of specific behaviours – Taxonomical approach to the teaching of Economics – Procedural approach of objective based instruction.

Unit–II
Organization of subject matter – Content analysis, principles of content analysis – For the content of Higher Secondary Economics.

Unit–IV
Motivating students – For different lesson in Economics – Development of different motivating skills.

Unit–V
Effective Teaching of Economics – Types – Development of Teaching skills – Curriculum base-Teaching aids – Based.

Unit–VI
Organizing learning Experience-Types – Levels, Procedures – suitable for different – Topics in Economics.

Unit–VII

Unit–VIII
Identifying difficulties in learning different concepts in Economics – Providing suitable remedial methods for enriching teaching – Learning process.

Unit–XI

Unit–X
Practical Work
1) Developing diagrams and graphs for a particular economic data.
2) Conducting economics surveys – procedures.

Reference Books
3) Amita Yadav, The Teaching of Economics.
4) Vakil, Teaching of Economics.
5) Journal of Economic Education.
6) Vedenayagam, Hand Book for College Teachers.

COURSE–V(A) : OPTIONAL COURSE
158. INNOVATIONS, TRENDS AND APPROACHES IN TEACHING COMMERCE (HSL)

Objectives
The Student teacher
- acquires knowledge of the principles of content and conceptual analysis.
- understands the various aspects of content analysis.
- applies the knowledge in analyzing the commerce and accountancy content in pedagogical terms.
- develops skill in construction and preparation of lesson plans, question papers and teaching aids.
- develops interest in analyzing the various commerce course contents in pedagogical terms.
- develops a desirable positive attitude towards teaching commerce.

COURSE CONTENT
Unit–I

Unit–II
Aims and Values of Teaching Commerce-Values – practical, Social and Vocational – Taxonomical approach to teaching of commerce Instructional objectives – Specification – Principles Objective Based Instruction(OBI)

Unit–III
Importance of planning – Year plan, unit plan and lesson plan – analysis of unit plan – Meaning and principles involved.

Unit–IV
Organization of subject matter – types – concentric, topical, psychological – principles – Ways of introducing different topics – Motivating students for a commerce lesson – skill of introducing different topics in commerce.
Unit—V

Teaching Aids – Types – Importance-Use of Graphic Materials – Pictures, Charts, Diagrams – clipping form the newspapers, Original documents, office and commercial forms – Selection of appropriate aids for effective teaching of commerce-skill in teaching aids.

Unit—VI

Learning Experiences – Types – Cone o Experience-Characteristics of learning experience for the different methods of teaching.

Unit—VII


Unit—VIII

Review of units in commerce-Need and importance of reviewing lesson – Characteristics of a good review – Different techniques of reviewing a lesson.

Unit—IX

Assignment – Types – Importance-Characteristics of a good assignment.

Unit—X

Contemporary commercial and economical issues related to the teaching of commerce and accountancy – World Trade Organization – Economic crimes – Hawala – Security Scam, FERA (Foreign Exchange Regulation Act) – Violation, Privatization, Disinvestment, Green Consumer, population Environmental issues, e-commerce, FEMA (Foreign Exchange Management Act)

Practical Work
1) Export – Import Procedure manuals
2) Tax Procedure documents

Reference Books
COURSE–V(A) : OPTIONAL COURSE
176. INNOVATIONS, TRENDS AND APPROACHES OF TEACHING BOTANY (HSL)

Objectives
The student teacher

 acquires knowledge of the concepts, terms and procedures in the innovations, trends and approaches of teaching Botany.
 understands the concepts, terms and procedures in the innovations, trends and approaches of teaching Botany.
 applies the knowledge in actual classroom situations.
 develops skill in various activities pertaining to teaching and learning.
 develops interest in knowing recent development in the innovations, trends and approaches of teaching Botany.
 develops scientific attitude towards teaching and learning.
 appreciates the contribution of the subject to the teaching and learning.

COURSE CONTENT

Unit–I
The science of Biology – Historical overview – The great biologists – serendipity the significant discoveries and inventions. Botany and its various branches.

Unit–II
Psychological basis of science education science teaching and learning contributions of Piaget – Stages of intellectual growth, Gagne’s model of sequential learning – Bruner’s model of concept learning, implications in science teaching and learning.

Unit–III
Recent trends in curriculum development – student – subject and environment oriented approaches – curriculum development and improvement practices in India.

Unit–IV

Unit–V
Class – room climate-authoritarian – laissez faire and democratic climates – Flander’s interaction analysis.

Unit–VI
Educational technology in Botany teaching – programmed learning – computer assisted instruction – mass media for Botany learning.

Unit–VII
Unit–VIII
Diagnosis of students difficulties in learning Botany – providing suitable remedial measures.

Unit–IX
Review of units in Botany – Need and importance of reviewing lesson – Characteristics good review – different techniques of reviewing a lesson.

Unit–X
Types of assignment to be given – importance of assignment in learning Botany and characteristics of good assignment – Research in Biology education.

PRACTICAL WORK
1) Organization of symposium on Botany topic.
2) Select one or two topics from H.Sc Botany syllabus – identify the learning difficulties and suggest suitable remediable measures.

Reference Books
6) Ratho, T.N. and Raviprakash, Emerging Trends in Teaching of Botany, Kanishka Publishers, Distributors 4697/5 – 21, Ansari Road, Daryagij, New Delhi, 1996.

COURSE–V(A) : OPTIONAL COURSE
182. INNOVATIONS, TRENDS AND APPROACHES OF TEACHING COMPUTER SCIENCE (HSL)

Objectives
The Student teacher
- acquires knowledge of the Concepts terms and Procedures in the Content and methodology of teaching Computer Science.
- understands the concepts, terms and procures in the Content and Methodology of teaching Computer Science.
- applies the knowledge in actual class – room situation in teaching Computer Science.
- develops skill in various activities pertaining to teaching and learning.
develops interest in knowing recent development in the Content and Methodology of teaching computer Science.

- develops Scientific/Positive attitude towards teaching and learning
- appreciates the contribution of the subjects to the teaching and learning.

**COURSE CONTENT**

**Unit–I**

Modern approaches to the teaching of Computer Science, seminar – symposium – group discussion – panel discussion – workshop techniques

**Unit–II**

Ways of introducing different topics – motivating students for the computer lesson – skill of introducing different topics in Computer Science.

**Unit–III**

Curriculum Development
- principles to be observed in framing a curriculum
- components of a curriculum
- organization of subject matter – concetric, topical, unit approaches
- Computer in the curriculum

**Unit–IV**

Use of Computer in education
- Conceptions in education
- Criteria for determining appropriate uses
- Planning for instructional uses of micro computers.
- Planning for administrative uses of computers.
- Policy and research implications.

**Unit–V**

Educational technology
- Filed trips: objective-concept – organization advantages and disadvantages.

**Unit–VI**

- Evaluation of Teachers
- Rating by superiors or colleagues
- Evaluation by pupils
- Self evaluation
- Comparing performance with lesson plan
- Class – room interaction analysis by Flander.
Unit–VII
Teachers of Computer Science
i. Professional equipment and responsibilities
ii. In Service equipments and responsibilities
iii. Role of NCERT and allied agencies

Unit–VIII
Review of units; need and importance of reviewing. Computer Science lesson – characteristics of a good review of a computer Science lesson.

Unit–IX
Types of assignments to be given – importance of assignment in learning Computer Science-characteristics of a good assignment in Computer Science.

Unit–X
Analysis of unit plans: meaning of unit plan principles involved in the preparation of unit plans in Computer Science.

Practical Work
1) Preparation of instructional materials for any Unit–In Computer Science.
2) Developing application software at least two in number in Education.

Reference Books
2) Balagursamy, Programming in Basic, THN, Delhi.
4) Gotstried, Progamming with BASIC, SCHAUM.
5) Malvino, Digital Computer Electronics, TMH, Delhi.

COURSE–V(A) : OPTIONAL COURSE
185. INNOVATIONS, TRENDS AND APPROACHES – POLITICAL SCIENCE (HSL)

Objectives
The student teacher

- acquires knowledge of the concepts, terms and procedures in the innovations, trends and approaches of teaching Political Science.
- understands the concepts, terms and procedures in the innovations trends and approaches of teaching Political Science.
- applies the knowledge of various methods and techniques in teaching Political Science at the higher Secondary level.
- develops skills in preparing and using maps, charts, models and lesson plans with Reference Books to the Higher Secondary Political Science Syllabus.
- develops interest in organizing Co-Curriculum activities.
- develops a Positive attitude towards the necessity of international peace and Security.
- appreciates the commendable nature of Indian Constitution.
COURSE CONTENT

Higher Secondary Political Science Syllabus prescribed in Tamilnadu from time to time with Reference Books to the following aspects.

Unit–I

Instructional objectives and development of specific behaviour – Taxonomical approaches to the teaching of Political Science – Advantages of objective based instruction.

Unit–II

Organization of subject mater – Meaning of content analysis – principles of content analysis – Conceptual analysis – Use of conceptual analysis to analyze the content of Political Science.

Unit–III

Ways of introducing topics – Motivating students for a class – skill of introducing different topics in Political Science.

Unit–IV

Types of learning experiences – Characteristics for learning experience required for different methods of teaching.

Unit–V

Teaching Aids – Selection of appropriate aids for effective teaching of Political Science-Skill in using teaching aids.

Unit–VI

Constructing of suitable test items objective based and objective type test items to enrich teaching – Learning – process in Political Science.

Unit–VII

Diagnosis of student’s difficulties in learning Political Science and providing suitable remedial measures.

Unit–VIII

Review of units in Political Science-Need and importance of reviewing lessons – Characteristics of a good review of a lesson – Different techniques of reviewing a lesson.

Unit–IX

Type of assignment to be given – Importance of assignments in Political Science-Characteristics of good assignment.

Unit–X

Analysis of unit plan – Meaning of unit plan Principles involved in the preparation of unit plans in Political Science.

Reference Books

3) Briault, E.W.H. and D. Shave, Geography in and Out of School.
5) Brick, C.D.J., An Experiment to Teaching Geography.
7) Chose, K.D., Creative Teaching of History.
Copsill, G.H., Teaching of Geography.

9) Dyand, A.A., Hand Book for History Teachers.
10) Frindly Johnson, The Dramatic Methods fo Teaching.
11) Ghose, K.D., Creative Taching of History.
14) Hill, C.P., Suggestions for the Teaching History, UNESCO.
16) NCERT, Practical Geography, A Text Book for Secondary Schools.
17) Pickles, T., Elementary Map Reading.
18) Suddha Praksah, The Modern Approach to History, D.W.Shave: Geography in
and out of School.
19) Aggarwal, J.C., Teaching of Political Science, Vikas Publishing House Pvt Ltd.,
New Delhi.
20) Aggrawal, J.C., Teaching of Social Studies.
1688 – Nai Sarak, Delhi.
22) Saiyidain, K.G. Education for International Under – Standing, Hind Kitabs,
Bombay, 1948.
24) Role of UNESCO in Education.

COURSE–V(B) : OPTIONAL COURSE
160. CONTENT AND METHODOLOGY OF TEACHING ENGLISH

Objectives

The student teacher

- acquires the knowledge of the concepts, terms and procedures in the
content and methodology of teaching English.
- understands the concepts, terms and procedures in the content and
methodology of teaching English.
- applies the knowledge in actual class room situations.
- develops interest in knowing recent developments in the content and
methodology of teaching English.
- develops positive attitude towards teaching and learning of English
- appreciates the contribution of the subject to the teaching and learning.

Note: Common for the students who have taken English Literature as major
and to other subjects also.

Unit–I

Subject matter of VI to X standard English text books prescribed by Tamil
Nadu Government form time to time.

Unit–II

English in Indian Education – Elements of English Language-Pre-
Independence period – Post-Independence period – Place of English Language in the
School Curriculum – Problems of learning a foreign language-Influence of mother tongue.

**Unit–III**

**Unit–IV**

Approaches in teaching English – Structural approach – Situational approach.

Programmed instruction – Concept – Type-Advantages and disadvantages.

**Unit–V**

**Unit–VI**

**Unit–VII**

**Unit–VIII**
Technological Aids in teaching of English – Need and importance, types of A.V. aids – Simple classroom A.V. aids – Writing board, flash cards, charts, match stick drawings pictures, flannel board, tape Recorder, OHP and T.V.

**Unit–IX**
Language Laboratory – Need and importance-Computer Assisted English Language Learning (CAELL)

**Unit–X**
Characteristics of a good test – Construction of an Achievement test – objective type and objective based items – Item construction – Test design and Blue print – Preparation and administration procedures – Scoring key – Marking Schemes.

**Practical Work**
Practical work related to theory paper.

1) Preparation of picture album
2) Match – Stick drawings for teaching of structures.
3) Preparation of scrap book.

**Reference Books**

**COURSE–V(B) : OPTIONAL COURSE**

**190. CONTENT AND METHODOLOGY OF TEACHING TAMIL**

**Objectives**

The student teacher

- acquires the knowledge of the concepts, terms and procedures in the Content and methodology of Teaching Tamil.
- understands the concepts, terms and procedures of methodology of teaching Tamil.
- applies the knowledge in the life related situation.
develops communication skills pertaining to teaching and learning.

devotes interest in knowing recent developments in the Content and methodology of Teaching Tamil.

devotes positive attitude towards teaching the Tamil language in teaching and learning.

devotes the appreciation of the Tamil language towards cultural heritage.

Unit–I

Language-Its origin, nature and importance-A brief review of the History of Tamil language-History of Tamil literature-Tamil Text books prescribed for standard VI to XII.


Unit–II

The place of Tamil in the curriculum, the position of Tamil in relation to other subjects in the school syllabus.

The medium of instruction at the various levels of education – the claims of Tamil–the correlation of the study of Tamil with other subjects including other language.

Unit–III

The aims and values of teaching Tamil–Language abilities and their relative importance.

A brief survey of teaching of Tamil with emphasis on traditional and modern methods: – play way – project, dramatization – creative work – individual and group work adaptation of the methods to various levels of education.

Unit–IV


Writing – the Importance of free arm drawing before the introduction of writing – correct posture-when to introduce writing with pencil pen and ink – lined books – copy books – play way in writing – legibility – progress from reproduction to free

Unit–V

The aims of teaching prose, methods of teaching prose-objective base teaching detailed exposition – the meaning of words, phrases and idioms – the choice of words, phrases – synonyms and antonyms – How to teach the different types of prose lessons extension of vocabulary. Teaching of Non-detailed texts – aims of teaching Non-detailed, introduction to library work, reading – independent study.


Unit–VI

Teaching of poetry – aims of teaching poetry – different types, for different stages, critical appreciation of poetry, elements of prosody and rhetoric.

Unit–VII

Teaching of grammar – Function and place of grammar in language teaching, incidental and systematic grammar – the stage at which formal study of grammar should begin – unconscious assimilation of grammatical forms and rules – and elementary grammar – value of rules and definition – use of inductive and deductive methods.

Unit–VIII

Teaching of Translation – aims of teaching translation, the need for the knowledge of different languages for translation – principles of translation, text book method, and composition method, liberal and free translation.

Unit–IX

Audio Visual Aids – Simple classroom aids, objects, black – board pictures, flash cards, tape recorders, television, films, slides and charts.

Unit–X


Practical Work

1) A critical examination of one Tamil Text Book.
2) Preparation of invitations and advertisements in Tamil.

Reference Books


**COURSE–VI(C) : OPTIONAL COURSE**

**159. INNOVATIONS, TRENDS AND APPROACHES IN TEACHING OF ENGLISH**

**Objectives**

The student teacher

- acquires the knowledge of the concepts, terms and procedures in the innovations, trends and approaches of teaching English.
- understands the concepts, terms and procedures in the innovations trends and approaches of teaching English.
- applies the knowledge in actual class room situations.
- develops skills in various activities pertaining to teaching and learning of English.
- develops interest in knowing recent developments in the innovations trends and approaches to teaching English.
- develops positive attitude towards teaching and learning of English.
- appreciates the contribution of English language to the teaching and learning.

**Unit–I**

Language-Concept – Meaning – Functions – Language as a means of communication – Language is arbitrary – Language is skill – Language is social behaviour.

**Unit–II**

Principles of Language Teaching – Speech before writing – Habit formation – Proper order and proportion – Passive and active Vocabulary.

**Unit–III**


**Unit–IV**

Curriculum development in English – Principles – Concept – Objectives of teaching English at various levels (Primary, Secondary and Higher Secondary Level)
as a secondary language, criteria for the selection of prose, poem, grammar and Non-
detailed texts.

Content analysis of the existing syllabus English phonetics – Speech organs
and their role-strong and weak forms – Stress – word, sentence-The five basic
sentence patterns – Tag questions – Tense forms – Auxiliary verbs – Question forms

Unit–V

Types of language learning experience-Dictionary skills – SQ3R – Note making
and summarizing – Different types of writing – Formal – Semi – Formal and informal
– Precise Writing – Composition – free-Guided. Comprehension of unseen passages
– Translation – Principles.

Unit–VI

Advanced methods and techniques of Teaching English – Direct method –
Bilingual method. Structural approach – Communicative approach. Language
Games – Individualized instruction – Programmed learning – CAELL – Language
Lab – Internet and its applications – Meaning – Working of Internet – e-learning –
World wide web – Teleconferencing – Satellite-EDUSAT

Unit–VII

Evaluation – Formative and summative-Taxonomical approach – Objective
based test for measuring achievement of language skills, Test design and Blue print
– Preparation and administration procedures – Question Bank – Standardized Tests
– Characteristics – TOFEL.

Unit–VIII

Diagnostic testing and Remedial teaching. Causes for errors – oral – Written –
lexical. Measures for correcting the errors – Selection of appropriate aids for
effective teaching of English.

Unit–IX

Review of units – Need and Importance of reviewing – Characteristics.

Unit–X

Researches in Teaching English – Improving the professional efficiency of
English Language Teaching (ELT) Role of Central Institute of English and Foreign
language (CIEFL) – National Council for Educational Research and Training
(NCERT) – Regional Institute of English (RIE, Bangalore) and The British Council.

Practical Work
1) Seminar/discussion on any topic from the prescribed text.
2) Radio lesson.
3) Write composition on selected topics.

Reference Books
1) Bagehi Ganesh, *Teaching Poetry in Schools and Colleges*, T.R.Publications,

COURSE–VI(C)

191. INNOVATIONS, TRENDS AND APPROACHES IN TEACHING OF TAMIL

Objectives

The student teacher

- acquires the knowledge of the concepts, terms and procedures in the innovation, trends and approaches of teaching Tamil.
- understands the concepts, terms and procedures in the innovation trends and approaches of teaching Tamil.
- applies the knowledge of the language in the life related situation.
- develops communication skills pertaining to teaching and learning.
develops interest in knowing recent developments in the innovation and trends and approaches of teaching Tamil.

develops positive attitude towards teaching the Tamil language in teaching and learning.

appreciates the contribution of the Tamil language towards cultural heritage.

Unit–I

The sound system of Tamil—the different speech organs and their role in producing speech sounds—Tamil phonetics, the nature of individual sounds, the Tamil vowels and consonants, classification according to grammarian and linguistics—Super segmentation of sounds—Articulation (Progressive-reciprocities) Accents in Tamil language—Stress—pitch—intonation—juncture—phonemes—allophones, morphemes, allomorphs, free variation—A thorough knowledge of five Tamil grammars and the commentators modern trends of thought in Tamil literature—emphasis on the relation between language and grammar elements of Tamil grammar with special emphasis on gender numbers. Case endings, Sandhi—Conjunction—agreement of the verb transformation of sentences, figures of speech etc.

Standardization of Tamil usage in the class rooms—teaching Tamil Language through computer—Using computer and internet resources in Tamil teaching—Animated Sanga Tamil Poems—Teaching Tamil through Google—Language tools for Tamil—Tamil websites and search Engines—Tamil Dictionaries and Books in Internet.

Unit–II

The Social function of language—social norms—dialect register—the medium of communication status—situation. The psychology of language—psychological theories applied to language learning—individual differences in language learning—aptitude—motivation.

Unit–III

New dimension in the teaching of language with particular Reference Books to Tamil—Innovation in Tamil—individual instruction—merits and demerits of the class teaching and the need for individualized instruction—term teaching, programmed instruction, teaching machine, micro—teaching, supervised study, diagnostic testing and remedial instruction.

Unit–IV

Spoken Tamil—Deficiencies in Tamil Speech colloquial forms—Slang diagnosis and remedial measurement phonetic drill. Vowels, consonants, gender markers, number markers—language laboratory and its use.

Written Tamil—Deficiencies in written Tamil—loan words—influence of other language diagnosis and remedial measures various forms of writing—narration, essay, precise, etc.,
Unit-V

General principles of framing a curriculum – objectives of the syllabus – selection of the content in the Tamil syllabus. Evaluation of Tamil Syllabus at different levels of School Education.

Unit-VI

Organization of language teaching Schemes of work, year plan unit lesson plan objectives based teaching.

Unit-VII


Unit-VIII

Researches on Teaching of Tamil–Kinds of research – Action research, experimental projects and developmental projects.

Unit-IX

Language Teacher – Characteristics – pre-service training and in service training.

Unit-X


Practical Work

1) Coining new technical terms
2) Preparing a programme for a grammar unit (Programmed instruction.)

Reference Books

9) Dr. M.S. Thirumalai, Tamil Karpithal or Mozhi Karpithal, Manivasagar Noolagam, Chidambaram, 1978.
COURSE–VI(C)

169. CONTENT AND METHODOLOGY OF TEACHING MATHEMATICS (HSL)

Objectives

The student teacher

- acquires knowledge of the concepts, terms, and procedures in the content and methodology of teaching Mathematics.
- understands the concepts, terms and procedures in the content and methodology of teaching Mathematics.
- applies the knowledge in actual classroom situation.
- develops skills in various activities pertaining to teaching and learning.
- develops interest in knowing recent development in the content and methodology teaching mathematics.
- develops scientific/positive attitudes towards teaching and learning.
- appreciates the contribution of the subjects to the teaching and learning.

COURSE CONTENT

Unit–I

Aims and values of teaching Mathematics – development of functional and critical thinking, skills in the use of Mathematical language, habits of concentration, self-reliance and discovery – Mathematical attitude and personality traits.

Unit–II

Taxonomical approaches of teaching Mathematics, need and importance – instructional objectives and specifications. Preparation of lesson plans.

Unit–III

Mathematics curriculum at Higher Secondary Level.

Unit–IV

Methods of teaching Mathematics.
- Lecture method,
- Heuristic method,
- Laboratory
- Project method, merits and demerits of each method.

Unit–V


Unit–VI


Unit–VII

Micro teaching – concept – procedure and planning. Teaching skills – set induction, Motivation, Introducing the lesson, use of black board, questioning, probing, questions, students participations, reinforcement, using examples, and closure.
Unit–VIII
Interest and developing positive attitude – Mathematics club – Library – Exhibition – Field trip.

Unit–IX
Construction of Achievement tests –objective type and objective based items item construction. Test design and Blue print – Sorting – Characteristics – Preparation and administration – procedures.


Unit–X

Practical Work
1) Preparation of scrap book on development of mathematics.
2) Preparation of geometrical wooden model to teach sets.
3) Drawing graphs, and pictures of important topics.

Reference Books
1) Aggarwal, S.M., Course of Teaching of Modern Mathematics, Dhanapal Rai and Sons, New Delhi.
4) Bhimsankaran, C.V., Mathematics, Education, Book Field Centre, Mumbai.
90. CONTENT AND METHODOLOGY OF TEACHING PHYSICS (HSL)

Objectives
The student teacher

- acquires knowledge of the concepts, terms, and procedures in the content and methodology of teaching Physics.
- understands the concepts, terms and procedures in the content and methodology of teaching Physics.
- applies the knowledge in actual classroom situation.
- develops skills in various activities pertaining to teaching and learning.
- develops interest in knowing recent development in the content and methodology teaching Physics.
- develops scientific/positive attitudes towards teaching and learning.
- appreciates the contribution of the subjects to the teaching and learning.

COURSE CONTENT

Unit–I
Teaching of Physics through mother tongue: Need and importance – significance of pronunciation – Use of appropriate technical terms – advantages.

Unit–II
Modern Technology in teaching of Physics through mother tongue: Use of appropriate and recent teaching aids – Web resources – Application of internet – Research in teaching of Physics through mother tongue.

Unit–III
Higher Secondary Physics subject matter specified by Tamilnadu government from time to time respectively.

Aims and specific objectives of teaching physics at the Higher Secondary level taxonomical approach of teaching physics. Bloom's objective based instruction – Objective based lesson plan for higher secondary level.

Unit–IV
Science curriculum at the Higher secondary Level – Principles of selection – Different type of organization of subject matter – Curriculum improvement projects aboard – PSSC, CHEM and study chemical bond approach

Unit–V

Unit–VI
Teaching skills – Microteaching – Concept features – programme.

Unit–VII
Achievement test construction – Objective based test items, forms of question – Construction – items, forms of question – Item analysis – Design and Blue print for a rest – Normal probability
Unit–VIII

Unit–IX
Planning for a science laboratory Structure and design allocation amenities – organization of laboratory – work – individual work and group work – Discipline in the laboratory – accidents and first aids.

Unit–X
Instructional devices Hardware and software approaches.
Science teacher, characteristics – qualifications – professional development.
Physics in the modern world – Bio-Physics – Environmental Education.

Practical Work
1) Preparation of indents for laboratory – Chemical and apparatus
2) Study of the faculties available for teaching Science in any one school

Reference Books

COURSE–VI(C)
171. CONTENT AND METHODOLOGY OF TEACHING CHEMISTRY (HSL)

Objectives
The student teacher
- acquires knowledge of the concepts, terms, and procedures in the content and methodology of teaching Chemistry.
- understands the concepts, terms and procedures in the content and methodology of teaching Chemistry.
- applies the knowledge in actual classroom situation.
- develops skills in various activities pertaining to teaching and learning.
- develops interest in knowing recent development in the content and methodology teaching Chemistry.
- develops scientific/positive attitude towards teaching and learning.
- appreciates the contribution of the subjects to the teaching and learning.

COURSE CONTENT
Unit–I
Higher Secondary chemistry subject matter specified by Tamil Nadu Government from time to time respectively.

Unit–II
Aims and specific objective of teaching chemistry at the Higher Secondary level.
Taxonomical approach of teaching chemistry – Blooms objective based instruction – Objective based Lesson plan for higher secondary level.

Unit–III

Unit–IV

Unit–V
Teaching skills – Micro teaching – Concept Features – Programme.

Unit–VI

Unit–VII

Unit–VIII
Planning for a science laboratory – Structure and design – Location amenities – Organisation of Laboratory work – Individual work and group work – Discipline in the laboratory – Accidents and first aids.

Unit–IX

Unit–X
Chemistry in the Modern world Bio-Chemistry – Environmental Education.

Practical Work
1) Ten experiments in Higher Secondary
2) Precautionary steps taken to avoid accidents in Science laboratory.

Reference Books
COURSE–VI(C)
172. CONTENT AND METHODOLOGY OF TEACHING ZOOLOGY (HSL)

Objectives

The students teacher

- acquires a through knowledge of topics in Zoology taught in H.Sc., Schools and the latest development.
- Understands the
  - importance of zoology in the modern age and as such the Need for teaching of zoology in Schools.
  - objectives of teaching Zoology at various levels and especially in the Higher Secondary Schools.
  - various steps of teaching zoology and aids to teaching
  - different steps involved in the scientific methods and organisation of content in zoology
  - teaching techniques to stimulate pupil’s interest in zoology
  - modern trends in the instructional methodology in the organization of content in zoology.
  - principles for developing zoology syllabus
- develops skills in
  - planning unit lessons and test in zoology
  - preparing, and using different Techniques of evaluation of pupils’ progress

COURSE CONTENT

Unit–I

Zoology subject matter of Higher Secondary syllabus prescribed by Tamilnadu Government from time to time.

Unit–II

Aims and values of teaching zoology at Higher Secondary level – Objectives of teaching Zoology with special Reference to Bloom’s Taxonomy – Preparation of unit plan – Objective Based Instruction – Scientific method – Scientific Attitude.

Unit–III

Micro teaching – Concept – procedure and Planning – Teaching skills – Set induction, the skills of motivation, use of black board, fluency in questioning, probing questions, Stimulus Variation, reinforcement, using examples, and closure.

Unit–IV

Principles of Curriculum development – Selection of content and organization of subject matter.


Unit–V

Methods of teaching Zoology – Lecturer – Demonstration – Heuristic–Project – Field Study and Environmental methods.

Unit–VI

A.V. Aids in Zoology teaching – Use of different aids
Multipurpose zoology laboratory and its organisations – Maintenance-Laboratory manuals – Apparatus – laboratory safety measures.

Unit–VII

Unit–VIII
The Zoology teacher – Characteristics – professional – equipment training of teachers pre-service and in service-role of NCERT and allied agencies.

Unit–IX
Collection, Preservation and display of Museum Speciman – maintenance of aquarium, terrarium, vivarium, use of incubator and so on.

Unit–X

Practical Work
1) Museum collection
   a) Preservation animals
   b) Collection of shells and feathers
2) Reporting of one’s participation in science club activities.

Reference Books
1) B.S.C.S., Molecules to Man.
5) Gratman & Suksin, Gene Action (Eastern Economic Edition)
8) Miller & Blaydes, Methods and Materials for Teaching Biological Science methods in Biology.
10) Munzer and Brand, Teaching Science through Conversation.
16) Uttamkumar Singh, Teaching of Science.

COURSE–VI(C)

173. CONTENT AND METHODOLOGY OF TEACHING HISTORY (HSL)

Objectives
The student teacher
- acquires knowledge of the concepts, terms, and curricular approaches related to history.
- understands the concepts, terms and procedures in the content and methodology of teaching history.
- applies the knowledge of history in actual life situation.
- develops skills in pertaining and using of various types of teaching aids
- develops interest in writing articles our Historical aspects.
- develops healthy social attitude in practicing the spirit of noble ideas.
- appreciates the contribution of Indians to world peace.

COURSE CONTENT
Unit–I :
Section: A – Content
Subject matter specified in the History syllabus for standard XI – XII Prescribed by the Tamil Nadu Government from time to time.

Section B – Methodology
Unit–II : Nature and Development of History
The meaning and scope of History – History of History – Different Conceptions of History – Biographical conception – History as the record of the past – Evolutionary conception – Implications of various conceptions of History to teachers – is History an art or science?

Unit–III: History – Its Features and Dimensions

Unit–IV : Goals of Teaching – History
The need and importance of teaching History – Aims and objectives – general and specific–Values – practical, Intellectual, Social, Moral and Cultural.

Unit–V : Need and importance of Objective Based Instruction
Instructional objectives and specifications – Specimen Lesson Plan. Lesson plan discussion.

Unit–VI : Teaching Skills
Set induction, motivation, introducing a lesson, explaining, questioning, use of black board, reinforcement, stimulus Variation, and closure.
Unit–VII: Teaching – Learning Strategies in History

Lecture, oral method, story telling, dramatization, source method, problem, project and unit methods.

Approaches – Dalton plan, the inductive approach, the deductive approach and team teaching.

Individualized instruction – Programmed learning, Computer assisted instruction.


Unit–VIII
The History Curriculum

Content, principles of selection : Individual, Social and National needs.

The claims of local history, national history and world history.

Theories influencing the selection of materials

Doctrine of natural taste and interests – Cultural epoch theory – Proceeding from near to remote – Psychological development of the child with the demands of the subject.


Correlation with Other Disciplines

Correlation of history with Civics – Geography – Literature – Economics.

Unit–IX : Learning Resources and equipments

Textbooks, library, museum, Historical Fictions and pupils records – Audio – visual aids – Mass media – History club and its activities.

Unit–X

Teaching of current events – The History Teacher – Evaluation in History.

Practical Work

Creative write-up of two pages on a current problem. “Analysis of two Higher Secondary Examination questions papers”.

Reference Books


18) UNESCO, *Education for International Understanding*, UNESCO.

**COURSE–VI(C)**

**174. CONTENT AND METHODOLOGY OF TEACING ECONOMICS (HSL)**

**Objectives**

The student teacher

- acquires the knowledge of methods of teaching Economics
- understands the principles, types, procedures and planning of teaching Economics at the higher secondary level.
- applies the method of teaching to various aspects of Economics
- develops the skill of
  a) Teaching Economics, organising economic experiences
  b) Testing through various techniques
  c) Using various graphic, other types of teaching aids for the class room.
  d) Developing the professional competency of the teacher of economics.
- develops favourable attitude towards the changes in the teaching of Economics.

**COURSES CONTENT**

**Unit–I**


**Unit–II**

Aims of Teaching Economics – At different stages inculcating values of teaching economics, methods of inculcation of values through the study of economics.
Unit–III
Curriculum organization – Economics at different levels – Regional, State, national and international.

Unit–IV

Unit–V
Planning and Methods of Teaching of Economics.

Unit–VI
New Development of Methods of Teaching Economics.

Unit–VII


Unit–VIII

Unit–IX: Evaluation in Economics

Unit–X
Professional growth of Teacher of Economics – Pre service-In service programme–Special Qualities required for the Teacher of Economics.

Practical Work
1) Budgeting economic expenses of your family.
2) A write-up on current economic policies.

Reference Books


**COURSE–VI(C)**

175. CONTENT AND METHODOLOGY OF TEACHING COMMERCE

**Objectives**

The student teacher

- acquires knowledge of the terms and concepts regarding the various methods and techniques of teaching,
- understands the different types of curriculum, methods of teaching and technology of teaching,
- applies the knowledge in analyzing, selecting and adopting the suitable methods, techniques and aids for the purpose of teaching,
- develops skills in preparing curriculum, and using the suitable techniques in test construction.
- develops interest in knowing the recent development in the teaching methodology, and technological developments, and
- develops a desirable positive attitude towards the teaching of Commerce.

**COURSE CONTENT**

**Unit–I**


**Unit–II**

Teaching Commerce and Accountancy in Mother tongue – Need and importance – Prospects and Problems in Teaching in Mother Tongue – Practical suggestion – views on Education in Mother Tongue.

**Unit–III**


**Unit–IV**

Unit–V
Modern approach – socialized recitation methods (Discussion methods) informal – seminar, symposium, workshop technique, panel discussion, individualized instruction methods, role playing, individual assignment – micro teaching – team teaching.

Unit–VI
Educational technology in learning commerce-programmed learning – Computer assisted instruction, modules – Commercial and Educational Broadcasting – interactive video, tale lecturer. In arming Commerce-Software development in other countries available in India.


Unit–VII
Commerce teaching and class room management – systems approach to the Commerce teaching – input – process – output and feedback – aspects in commerce teaching – class room interaction analysis – class room climate-types of teachers based on leadership styles – teacher dominated pattern, laissez faire pattern and democratically planned pattern – significance.

Unit–VIII

Unit–IX
Community resources – meaning, types and their uses in the teaching of Commerce establishing link between school and community field trip – work experience-guest speakers – Commerce club – developing commercial interest and attitude-activities.

Unit–X
Commerce department in the school system – commerce lab – teachers diary – record and registrars to be maintained – equipments – essentials and desirable.

Unit–XI
Commerce teacher – professional growth of teacher – Pre-service and in service programme qualities required for a good teacher – social and environmental responsibilities of the Commerce teacher – problems faced by the commerce teacher.

Research in the field of Commerce Education – Computer in commerce Teaching and Research.

Practical Work
1) Company documents
2) Visit to small scale industries and Co-operative institutions.

Reference Books


**COURSE–VI(C)**

**177. CONTENT AND METHODOLOGY OF TEACHING BOTANY (HSL)**

**Objectives**

The Students teacher

- acquires knowledge of the concepts, terms, and procedures in the content and methodology of teaching Botany
- understands the concepts, terms and procedures in the content and methodology of teaching Botany
- applies the knowledge in actual classroom situation.
- develops skills in various activities pertaining to teaching and learning.
- develops interest in knowing recent development in the content and methodology teaching Botany
- develops scientific/positive attitudes towards teaching and learning.
- appreciates the contribution of the subjects to the teaching and learning.
COURSE CONTENT

Unit–I
Botany subject matter of Higher Secondary syllabus prescribed by Tamilnadu Government from time to time.

Unit–II
Aims and values of teaching Botany at Higher Secondary level – Objectives of teaching Botany with special Reference Books to Bloom’s Taxonomy – Preparation of unit plan objective based instruction – Scientific method – scientific attitude.

Unit–III

Unit–IV

Unit–V
Methods of Teaching Botany – Lecturer, Demonstration – Heuristic–project filed – Study and environmental methods.

Unit–VI
A.V. aids in Botany teaching – use of different aids – multipurpose Botany laboratory and its organization maintenance-Laboratory manuals. Apparatus – Lab safety measures.

Unit–VII
Evaluation in Botany – Achievement test construction – Characteristics – Types – Objective based testing, science attitude-Aptitude tests – Interest inventory.

Unit–VIII
The Botany teacher – characteristics – Professional – equipment – training of teachers pre-service and in service role of NCERT and allied agencies

Unit–IX
Museum specimen Collection – preservation and display Maintenance of aquarium, terrarium, vivarium use of incubator and so on.

Unit–X

Practical Work
1) Preparation of two slides
2) Preparation of charts indicating the commercial and botanical name for twenty very useful plants.
Reference Books

3) Gratman & Sukkin, Gene Action (Eastern Economic Edition)
6) Miller & Blaydes, Methods and Materials for Teaching Biological Sciences Methods in Biology.
7) B.S.C.S. (Blue Version), Molecules into Man.
8) B.S.C.S. (Yellow Version), An Enquiry into Life.
12) Ratho, T.N., A Source Book for the Biological Science.
13) Munzer and Brand, Teaching Science through Conservation.
14) Nair, C.P.S., Teaching of Science in Our School, Chand & Co. P. Ltd., New Delhi.

COURSE–VI(C)

184. CONTENT AND METHODOLOGY OF TEACHING COMPUTER SCIENCE (HSL)

Objectives

The Student teacher

- acquires knowledge of the concepts, terms, and procedures in the content and methodology of teaching Computer Science.
- understands the concepts, terms and procedures in the content and methodology of teaching Computer Science.
- applies the knowledge in actual classroom situation in teaching Computer Science.
- develops skills in various activities pertaining to teaching and learning.
- develops interest in knowing recent development in the content and methodology teaching Computer Science.
- develops scientific/positive attitudes towards teaching and learning.
- appreciates the contribution of the subjects to the teaching and learning.

COURSE CONTENT

Unit–I

Syllabus of standard XI and XII Prescribed by the Government of Tamil Nadu.

Unit–II

Teaching of Computer Science

Need and importance of Computer Science in schools.
Aims of Computer Science teaching in border perspectives’
Maxims of teaching
Scientific attitude.

Unit–III
Preparation of lesson Plan – Objective Based Instruction.
Instructional objectives and development of specific behaviour.
Bloom’s Taxonomical approach to the teaching of Computer Science.
The attainment of aims and values through the objectives.

Unit–IV
Educational computing.
Roots and rudiments – computer resources and applications – origin of computers and their impact on current developments – types of computer applications and systems used in educational setup – the basic hardware educational setup – the basic hardware components and micro computer system.

Unit–V
Computer software: Categories of software-different procedures for acquiring software advantages – the ethical and practical issues involved in software piracy.
Computer Technology: The growing capability of Computer Technology – use of Robots artificial intelligence-office automation.

Unit–VI

Unit–VII
Computer Assisted Instruction (CAI)
1) Basic assumptions of CAI and CAI system.
2) Major categories of CAI instructional software.
3) Importance advantages of CAI over other instructional methods.
4) Limitations of CAI in comparison with other instructional methods.
5) Attributes of good CAI lessons.

Unit–VIII
Writing (CAI) instructional programmes.
i. A systematic plan for developing CAI programmes.

Unit–IX
Audio – Visual Education
iii. Improvised teaching aids.

Unit–X
Evaluation in Computer Science
i. The concept of evaluation and techniques
ii. Evaluation for achievement, diagnosis and predication
iii. Various kinds of test
iv. Principles of construction and administration on an achievement test.
v. Scoring and summarizing the result.
vi. Preparation of unit test.

Practical Work
1) Preparation of instructional materials for any Unit–In Computer Science.
2) Developing application software atleast two in number in education.

Reference Books
2) Roger Humt Hon Shelley, *Computers and Common Sense*, Prentic Hall (India) Delhi.
3) Shied, *Introduction to Computer Science*, SCHAVM.

COURSE–VI(C)
186. CONTENT AND METHODOLOGY OF TEACHING POLITICAL SCIENCE (HSL)

Objectives
The student teacher
- acquires knowledge of the concepts, terms, and procedures in the content and methodology of teaching Political Science
- understands the concepts, terms and procedures in the content and methodology of teaching Political Science
- applies the knowledge of Political Science in actual life situation
- develops skills in preparing and using various types of teaching aids related to Political Science
- develops interest in reading books, magazines etc, related to Social ,Civic, and Political Problems
- develops positive attitudes assuming Social and Civic responsibility
- appreciates the contribution of the subjects to the teaching and learning Political Science

COURSE CONTENT
Unit–I
Introduction
The nature and scope of Political Science-History of Political Science-Different concepts of civics and their implications – Political Sciences as an art or science-The importance of political science in the current educational systems.
**General Aspects**

Major divisions of Political Science Political theory, Government and Politics, Public administration, international politics, constitutional Law.

**Unit–II : Modern Constitutions**

Organisation of the Government Indian constitution, its working and problems – Constitutional Law – Comparative constitutions – Foundation of civic life – Social, economic and political.

**Unit–III**

Aims and objectives and values of teaching political science – Aims and objectives – General and specific, Value: – Political Practical and intellectual development – Need and importance of objective-based instruction lesson planning – steps.

**Unit–IV**

Curriculum development – Content

Principles of selection and organization of subject matter and drawing of syllabus – Curriculum content of political Science – Modern constitution and civics, claims of the family neighborhood community, local, State and National government and political organization of Indian constitution and its working constitutional Law – Place to be given to the study of political theory, comparative Government and politics, public administration and international relation.

**Unit–V**


**Unit–VI**


**Unit–VII**


**Unit–VIII**


**Unit–IX**


Software and Hardware-An integrated approaches: Micro teaching technique in Political Science-The Political Science teacher.

Unit–X : Evaluation


Practical Work


Reference Books


COURSE–VI : OPTIONAL COURSES

161. CONTENT AND METHODOLOGY OF TEACHING SOCIAL SCIENCE (SL)

Objectives

The Student teacher

- acquires knowledge of the concepts, terms, curriculum approaches at various stages,
- teaching and learning strategies, and valuation procedures pertaining to social science.
- understands the concepts, terms and procedures in the content and methodology of teaching Social Science.
- applies the knowledge of social science in actual class room situations.
- develops skill in training and using various types of maps and other appliances.
- develops interest in knowing the current trends in socio, economic and political spheres.
- develops a political attitude towards the cultural heritage of own ancient land.
- appreciates the cultural contributions of various dynasties.
COURSE CONTENT

Unit–I
Subject matter specified in the syllabus of Social Science for VI to X Std prescribed by the Tamilnadu Government from time to time.

Unit–II
Introduction – Meaning – Scope-Social Science and Social Studies – Difference between the Natural Science, Social Science and Humanities – Need and importance of Social Science in the modern age-The place of History – Geography – Civics.

Unit–III

Unit–IV

Unit–V

Unit–VI

Unit–VII
Gradation – Division of school Course–Primary – Secondary stages – Theories influencing the selection of Social Science Materials.

Unit–VIII
Individualized Instructions – Programmed Learning (PL) – Computer Assisted Instruction (CAI)

Unit–IX
Unit–X


Practical Work
1) A creative write up for developing National Integration.
2) Reporting of Current events.

Reference Books
3) Brauit, E.W.II and D. Shave, Geography in and out of School.
6) Copsil, G.H., Teaching of Geography.
7) Findly Johnson, The Dramatic Method of Teaching.
8) Ghat, D., Teaching of History.
9) Ghose, K.D., Creative Approach of History.
11) Hill, C.P., Suggestions for the teaching history UNESCO.
13) Kochar, S.K., Teaching of Social Science.
14) NCERT, Practical Geography – A Text Book for Secondary Schools.
15) Pickles, Elementary Map Reading.
19) UNESCO, Role of UNESCO in Education.

COURSE–VI

164. CONTENT AND METHODOLOGY OF TEACHING MATHEMATICS (SL)

Objectives
The student teacher

- acquires knowledge of the concepts, terms and procedures in the content and methodology of teaching mathematics.
- understands the concepts, terms and procedures in the content and methodology of teaching mathematics.
- applies the knowledge in actual classroom situations.
- develops skill in various activities pertaining to teaching and learning.
- develops interest in knowing recent developments in the content and methodology of teaching mathematics.
- develops scientific/positive attitude towards teaching and learning.
- appreciates the contribution of the subjects to the teaching and learning.

**COURSE CONTENT**

**Unit–I**

Aims of teaching Mathematics at Secondary level – develop functional and critical thinking, skill in the use of Mathematics languages, habits of concentration, self – reliance and discovery, Mathematical attitude and personality traits.

**Unit–II**

Values of teaching, Mathematics at Secondary level. Practical, Disciplinary, cultural and social values.

**Unit–III**

Taxonomical approach of teaching Mathematics – Need and importance, instructional objectives and specifications, preparation of lesson plans.

**Unit–IV**


**Unit–V**

Methods of teaching: – (a) Lecture method (b) Heuristic method (c) Laboratory method (d) Project method, Merits and demerits of each method.

**Unit–VI**


**Unit–VII**


**Unit–VIII**

Micro teaching – concept – procedure and planning, teaching skills – motivation, introducing the lesson, use of black – board, questioning, using examples and closure.

**Unit–IX**

Interest and development positive attitude-Mathematics club – library. Exhibition – Field trips.

**Unit–X**

Practical Work
1) Preparation of album related to content of mathematics.
2) Preparation of software material for any one the units in the teaching of mathematics.
3) Preparation of wooden models for geometrical figures.

Reference Books
1) Aggarwal, S.M., *A Course of Teaching of Modern Mathematics*, Dhanmairai and Sons, New Delhi,
2) Ball, W.N.R., *A Short History of Mathematics*.
9) Fletcher, T.G., *Some Lessons in Mathematics*, O.U.P. Cambridge

COURSE–VI
165. CONTENT AND METHODOLOGY OF TEACHING PHYSICAL SCIENCE (SL)

Objective
The Student teacher
- acquires knowledge of the concepts, terms and procedures in the content and methodology of teaching mathematics.
- understands the concepts, terms and procedures in the content and methodology of teaching mathematics.
- applies the knowledge in actual classroom situation.
- develops skill in various activities pertaining to teaching and learning.
- develops interest in knowing recent developments in the content and methodology of teaching mathematics.
- develops scientific/positive attitude towards teaching learning
- appreciates the contribution of the subjects to the teaching and learning.

**COURSE CONTENT**

**Unit–I**
Physics and Chemistry subject matter specified in standard VI to IX in science syllabus by Tamilnadu Government form time to time respectively.

**Unit–II**
- b) Educational commission reports with special Reference Books to science education.
- c) Values of science-Disciplinary values of science teaching.
- d) Scientific attitude.

**Unit–III : Teaching of Science**
- a) Aims and objectives of science teaching in broader perspectives.
- b) Bloom’s taxonomy
- c) Maxims of teaching.

**Unit–IV**
- a) Principles of selection of content materials for science curriculum in schools
- b) Modern trends in curriculum development PSSC, CHEM study and chemical Bond Approach.
- c) Text books – Library books – Journals
- d) Evaluation of science textbooks.

**Unit–V Instructional Methods and Techniques**
- b) Objective based instruction
- c) Programmed instruction – Concept, Types, advantages and disadvantages.
- d) CAI – Concept Advantages and limitation.

**Unit–VI: Micro Teaching**
- a) Microteaching concept principles and procedures
- b) Teaching skills
- c) Link lessons.

**Unit–VII: Science laboratory and its Organization**
- a) Planning of science laboratory – Structure and design – Location and accommodation Amenities – Ventilation, Lighting, Water supply, fuel etc. – Preparation of indents.
- b) Organization of laboratory work, individual work and group work.
c) Discipline in the laboratory – Rules for pupils and teacher – supervision and Guidance.
d) Accidents in the laboratory – Rules for pupils and teacher – supervision and guidance.
e) Accidents in laboratory – First aids.

Unit–VIII : Tests in Science
   Characteristics of a good test – Principles of construction of achievement test – Blue print – Interpretation of test scores – Normal probability curve-Types of tests scores: Raw scores, T – Scores and Z – scores.

Unit–IX : Technology in Science Education
   a) Need and importance of instructional devices in science teaching.
b) Improvisation of science equipment
c) Objectives and organization of science club, science fair and educational tour.

Unit–X: The Science Teacher
   a) Professional equipment and responsibilities
   b) Qualities of a science teacher
   c) In – Service programmes
   d) Recent developments in Physical science.

Practical Work
   1) Preparation of an exhibit for science exhibition
   2) Evaluation of science textbook.

Reference Books
   7) Nair C.P.S., Teaching of Science in Our School,Chand & Co. P. Ltd., New Delhi.
   11) Thurber Walter Bs Collectee Alfred, Teaching Science in Today’s Secondary School, Bostan Allch and Bacco.
Objectives
The Student Teacher

- acquires knowledge of the concepts, terms and procedures in the content and methodology of teaching Natural Science.
- understands the concepts, terms and procedures in the content and methodology of teaching Natural Science.
- applies the knowledge in actual classroom situations.
- develops skill in various activities pertaining to teaching and learning.
- develops interest in knowing recent developments in the content and methodology of teaching Natural Science.
- develops scientific attitude towards teaching and learning.
- appreciates the contribution of the subjects to the teaching and learning.

COURSE CONTENT

Unit–I
Biology subject matter of Std. VII, VIII and IX syllabus prescribed by Tamilnadu Government from time to time.

Unit–II

Unit–III
Science of biology – Biology as a school Subject–Justification for including biology as a Subject–Serendipity’s – Significant discoveries and inventions in biology – Great Indian biologists.

Unit–IV
Aims and values of teaching biology at primary and secondary levels.  
Objectives of teaching biology with special Reference to Bloom’s taxonomy.  
Preparation of unit plan – Objective based instruction.  
Scientific method – scientific attitude.

Unit–V : Curriculum in Biology
Principles of curriculum development – Selection of content and organization of subject matter.  

Unit–VI : Methods of Teaching
Correlation of biology with other subjects.
Unit–VII : A.V. Aids Biology Teaching
Need and importance of A.V. Aids, their classification and uses.
Biology laboratory – Organization – Maintenance and safety measures.

Unit–VIII
The biology teacher – Characteristics – Professional equipment training of teacher’s – Role of NCERT and allied agencies.
Micro teaching – Teaching skills.

Unit–IX : Evaluation
Concept – Techniques – Achievement tests.
Construction – Administration – Characteristics – Scoring various kinds of achievement tests – objective based evaluation.

Unit–X : New Development

Practical Work
1) Collection of shells and feathers.
2) Museum collection a Preserved insects.

Reference Books
1) B.S.C.S. (Blue Version), *Molecular Man*.
2) B.S.C.S. (Yellow Version), *An Enquiry into Life*.
7) Hoff, Science Teaching.
8) Miller & Blaydes, Methods and Materials for Testing Biological Science Methods in Biology.
10) Morhait, et.al., A Source Book for the Biological Science.
COURSE–VI

181. CONTENT AND METHODOLOGY OF TEACHING COMPUTER SCIENCE (SL)

Objectives

The student teacher

- acquires knowledge of the concepts, terms and procedures in the Content and Methodology of teaching Computer Science.
- understands the concepts terms and Procedure in the Content and Methodology of teaching Computer Science.
- applies the knowledge in actual class – room situation in teaching Computer Science.
- develops skill in various activities pertaining to teaching and learning.
- develops interest in knowing recent developments in the Content and Methodology of Teaching Computer Science.
- develops Scientific/Positive attitude towards teaching and learning.
- appreciates the contribution of the Subjects to the teaching and learning.

COURSE CONTENT

Unit–I

The subject matter specified in standard XI and XII in computer Science syllabus by Higher Secondary Board of Tamil Nadu from time to time.

Unit–II

Aims and values of teaching Computer Science at Higher Secondary level – Practical, social disciplinary; and cultural values – the concept of futurology.

Unit–III

Need and importance of objective based instruction of Computer Science-Taxonomical approach – instructional objectives and specifications – attainment of aims and values through of objectives.

Unit–IV

Curriculum of Computer Science for Higher Secondary level, basis for curriculum construction Evaluation and Revision, the role of teacher. Text books – uses – Characteristics.
Unit-V
Methods and approaches of teaching Computer Science Lecture-Demonstration – Lecture-Discussion. Analytic and Synthetic methods, Inductive-Deductive approaches grammatical example, structured facility and top down approaches.

Unit–VI
Programmed learning – concepts and procedure-meaning – teaching modular approach – Tutorials – Quiz as techniques of teaching – Limitations of each.

Unit–VII
Characteristics of good teacher of computer Science-Micro teaching procedure-developing various skills needed for Computer Science.

Unit–VIII
Teaching of different subjects – languages, Mathematics, Science etc. through CAI/CML.

Unit–IX
Test construction principles – achievement test – construction – different test items – diagnosis of student difficulties and providing remedial instructional.

Unit–X

Practical Work
1) Preparation of instructional materials for teaching units.
2) Developing application software for teaching materials.

Reference Books
1) Ramanujam, V.P., Computer Education, Mital Publicatins, New Delhi.
2) Thiagarajan, R., Computer for Beginners, Sterling Publication, Delhi.
3) Jaganath, V.K., Future of Distance Learning Designing Inteactivity.
4) Author Press, New Delhi (India).

RECORDS
1. EDUCATIONAL TECHNOLOGY RECORD
Educational Technology – Concept – Definition – Scope
Classification of Audio – Visual Aids.
Description, Operation and uses of the following equipments
Radio
Tape Recorder
Episcope (Opaque projector)
Slide projector – 35 mm
Over Head Projector
Television – Video
Computer
L.C.D. Projector (Theoretical aspects)
Preparation of Chart, Photographic slide, OHP Transparency (As many as possible relevant to their optional), Power Point etc.
Practical
1) Picture album (Each student shall collect a minimum of 15 pictures in relation to each of his/her optional subjects)
2) Scrap book (Clipping from newspapers, periodicals, journals etc on 5 different topics of educational interest)
3) Preparation of aids – charts, Pictures (drawn, printed photographed) transparencies – recording. Relevant to certain selected topics in the optional subjects.
For teaching practice
4) Each student teacher must know how to handle and operate atleast two Audio – Visual Equipment such as overhead projector, slide projector.

2. CONSTRUCTION OF TEST AND INTERPRETATION OF TEST SCORES
1) Need and importance of objective testing – Construction of objective type and objective based – test items, characteristics of good items in each – use of different types.
3) Characteristics of good achievement test – objectivity, reliability, validity and usability.
4) Diagnostic test – Planning its use for remedial teaching.
5) Frequency distribution – Meaning – Method of forming, the frequency table.
6) Measures of central tendency – Meaning Arithmetic mean, Median and mode- Relative merits.
9) Correlation of test scores Rank difference method.
10) Graphical representation – Histogram – Polygon cumulative.

3. PSYCHOLOGICAL TESTING AND CASE STUDY
Every student teacher should make a case study on any one pupil selected from his/her class of the teaching practice school and maintain comprehensive record of the same in the prescribed form.
In relation to the case study the trainee should conduct any one of the following psychological tests on the case selected.
   Interest inventory
   Creativity test
   Aptitude test
   Adjustment inventory
   Memory for meaningful and meaningless stimuli.

4. MICRO TEACHING
It is an innovative technique in the field of Education. It forms the basis for various skill developments in teaching. It is both a pre service and in – service training programme. It is therefore essential that each student teacher undergoes it
for enhancing proficiency in certain selected skills such as set induction, blackboard writing, Questioning probing questions, explaining, stimulus variation, reinforcement etc. Any three skills are to be selected by the concerned subject teacher.

A student teacher is expected to prepare micro lesson plans for the selected skills and practice it with his/her peer group under the guidance and supervision of the optional teacher concerned. After feedback, the lessons have to be modified and again to be practiced. Each cycle has to be modified and again to be practiced. Each cycle has to be coded in the specified proforma and such skill has to be prescribed twice-cycle and recycle.

These six lesson plans with coding sheets and remarks of the supervisor constitute a micro lesson record. A student teacher has to prepare two different records each one for concerned optional. Both the micro training and records are to be evaluated by the concerned optional teacher and mark list shall be submitted to the Head Department of Education before the commencement of practice teaching programme for the academic year.

5. ENVIRONMENTAL EDUCATION RECORD

   Meaning Definition and Need of Environmental Education
   Objectives of Environmental Education at school level.
   Fundamental principles of Environment, Human attitude towards environment.
   Environmental degradation its impact on health and hygiene, infection through air, water and food.
   Some common diseases due to environmental degradation.

**Record Work**

Survey of school environment
With the classroom neatness, cleanliness, ventilation, seating arrangement etc. With in the school but outside classroom.
   a) laboratory b) library c) playground
Evaluation of different techniques adopted to maintain clean environment in the school
Preparation of picture album highlighting the environmental aspects.
Preparation of posters, cartoons, comics and maps (atleast; 3in total) on environmental problems.
Preparation of radio lesson or song or drama or any other folk art script on environmental topic.

6. PHYSICAL EDUCATION

Physical Education – Aims and objectives
Modern trends in physical education – Teaching coaching, preparation for competition organizing sports meets and games.
Intramural competition – Fixtures – organization and conduct.
Major and minor games – Rules.
Health and safety Education.
Practicals
1) Physical education class organization and administration – Lesson plan (General) – Conducting general lesson classes.
2) Each student shall prepare at least five general lessons (which are to be submitted in the form of a record and teach these lessons.
3) Each student shall prepare and submit a picture album containing pictures connected with Sports and games.

7. EDUCATIONAL TOUR (or) CAMP ACTIVITIES
(Every B.Ed. trainee shall participate in educational tour or Camp Activities as a part of Community Study)

CAMP ACTIVITIES RECORD
Every B.Ed. trainee should participate in a camp programme for a minimum of 3 days to get him/her involved in community study. During the camp period the trainee should get orientation training in community needs like Scouting, Fire Service, First Aid-Medical Service, Consumer Protection, Environmental Education, Human Rights, Human Conflict Management, Disaster Management, Yoga etc. The Camp Activities consist of community work, getting special training in above community needs and creating awareness and resources in the camp area involving local people. A detailed report of camp activities must be submitted in the form of a record by every B.Ed. trainee.

Content
1) Importance of camp
2) Planning and organization of camp activities
   i. Preliminary enquiry
   ii. Permission to be sought
   iii. Budgeting
   iv. Facilities required
3) Mapping of places of camp identified
4) Details of activities organized
5) Outcomes (Awareness Created – Resources Generated – Personal Experiences) of the camp.

Record Work
Camp Activities Record.

EDUCATIONAL TOUR – RECORD
Every B.Ed. trainee shall participate in an educational tour to know the ways of
i. planning
ii. organizing
iii. financing
iv. executing and
v. evaluating the tour
They shall also prepare a detail report about the tour in a record form
Content
1) Field visit - Execution of educational tour meaning need and importance
   Educational implications.
2) Planning Organization execution, financing and evaluating the tour.
   i. Preliminary enquiry
   ii. Permission to be sought
   iii. Budgeting
   iv. Facilities required
   Safety measures (during travel at staying of visiting places)
3) Mapping of the places visited
4) Blue print of the places of Visit
5) Observation manual
6) Tour report

Record Work
Educational Tour – Tour report

8. SOCIALLY USEFUL PRODUCTIVE WORK (SUPW)
All students will do purposeful and meaningful work resulting in either goods
or services which are useful to the community.
   i. The concept of SUPW
   ii. The foundations of SUPW – Philosophical Sociological, Psychological,
      Economical and Physiological criteria.
   iii. The Objectives, principles and criteria of SUPW.
   iv. Strategy for implementation of SUPW in Schools.
   v. Evaluation of SUPW and criticism raised against SUPW.

Practical Work
Working for environmental sanitation programmes, such as removal of garbage
digging of drains and cleaning of unwanted vegetation.
Cleaning the classroom and the institution including the garden, playground
 etc.
   Decoration of the institution on special occasions.
   Tree plantation.
   Community service.
   A pupil teacher has to offer anyone activity keeping in view his/her interest
   and area of specialization.

Suggested Activities
1) Toy making
2) Photography
3) Preparation of certain useful items like detergents, Shampoo, Phenyl, Chalk,
   Candle etc.
4) Book binding
5) Greeting cards making
6) Envelope making
7) Sea – shell fancy item making
8) Nylon – wire weaving for chairs, baskets
9) Project related to conservation of energy.
PART–TIME EVENING PROGRAMME
(FOR B.Ed. STUDENTS)

BASICS OF INFORMATION AND COMMUNICATION TECHNOLOGY

Computer System


Operation of Computer

Switching: On / Off/ Restart

Mouse: Mouse control for movement of cursor, Clicking (Single/Double) of left button of mouse/right button of mouse.

Keyboard: Use of keyboard for entering information, familiarization with special keys, such as enter, delete, backspace, escape, control, Alt and some of the function keys.

Settings: Display, Desktop and icons.

Basic Features of Windows

Window: Control buttons, Scroll bar, menu bar, title bar, file, edit, view insert, format tools, table and help etc.

Activation of Programmes

Notepad: Usage of notepad, saving a file, file dialogue box, naming a file, opening a file, save as, etc.

Floppy Drive: Operations using Floppy Drive.

CD-ROM Drive: Operations using CD-ROM

Running a file: My Computer, Floppy Drive (A), CD Drive, Hard disk (C), selecting files from one drive to another.

Explorer; Folders creating a new folder, shifting a file from one folder to another, deleting a file, etc.

Loading Software: From floppy and CD drives.

MS-Office: MS–Word: Creation of document, use of editing facilities, bold, italics, underline, type of font, size of font line spacing, margins, paragraph – Saving and Retrieving Files from different drives, text editing, spell check, Thesaurus, insertion of files/text, objects, creations, creation of tables, Text printing.


MS-Power Point: Preparation of Slides, Slide show.

Preparation of Lesson Plans

Preparation of lesson plans using MS-Word and Power point.
INTERNET

Logging on to Interest through an Internet Service Provide-Account, Internet Explorer, Search Engines, Search of information using key words, Opening a website from URL, Saving information from the WWW onto hard disk/floppy; E-mail: Creation of mail, and inbox, outbox, attachment of files, chat, voice mail, etc.

Appreciation of Computer network for online sharing of information between computers, information on the web, need of monitoring and discrimination of information, protection of the system from viruses.

Assignments and Projects

Project Reports: Eg. Collection of Students information School, Data, Social Survey, Preparation of School Budget and Balance sheet.

Uses of CD and Floppies in Computer Based Learning.

Using Internet – Sending and Receiving E-mail – Collecting information on Education and other related Activities.

Reference Books