

  
**ANNAMALAI UNIVERSITY**  
**FACULTY OF EDUCATION**  
**DEPARTMENT OF EDUCATION**  
**Bachelor of Education (B.Ed.)**  
**REGULATIONS AND SYLLABUS**  
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**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:

#### **PART-A : THEORY**

<b>Course Code</b>	<b>Courses</b>	<b>Courses Name</b>
110	Course-I	Education in Indian Society – Status, Problems and Issues
120	Course-II	Psycho – Pedagogy
130	Course-III	Curriculum Development
	Course-IV	<b>Electives</b>

#### **ELECTIVES**

<b>Course Code</b>	<b>Courses Name</b>
141	Pre-Primary Education
142	Vocational Education
143	Educational Management
144	Non-Formal Education
145	Computer Education
146	Guidance and Counselling
147	Population Education
148	Essentials of Teaching – Learning
149	Adult Education
150	Environmental Education
178	Teacher Education
179	Health, Yoga and Value Education
180	Human Rights Education
189	Evaluation, Elements of Statistics and Research
192	Educational Technology
(N.B: Each Student Shall offer One Elective from the above)	

#### **COURSE-V**

Innovations, Trends and Approaches in Teaching of Mathematics / Physics / Chemistry / Botany / Zoology / History / Political Science / Economics / Commerce and Computer Science, (Higher Secondary Level).

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.

#### **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 31<sup>st</sup> 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:

Courses	Continuous Assessment Marks	Maximum Marks (External)	Duration in Hours	Minimum Marks for a Pass (External 45% Out of 75)	Total Marks	Minimum Marks for a Pass 50% Out of 100
Course-I	25	75	3	34	100	50
Course-II	25	75	3	34	100	50
Course-III	25	75	3	34	100	50
Course-IV	25	75	3	34	100	50
Optional Course-I						
Course-V	25	75	3	34	100	50
Optional Course-II						
Course-VI	25	75	3	34	100	50
<b>Total</b>	<b>150</b>	<b>450</b>	<b>-</b>	<b>-</b>	<b>600</b>	<b>300</b>

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.

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

- 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:**

Sl. No.	Type	Length of Answer	No. of Question to be Attempted	Type of Choice	Marks per Question	Total
A	Very Short Answer	Each in about 70 Words	10	No Choice	02	20
B	Short Answer	Each in about 250 Words	5	Out of 7	05	25
C	Essay Type	Each in about 750 Words	2	Internal Choice 2	15	30
	–	–	17	Grand Total	–	75



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**

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

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 pervious 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**

Western schools – Idealism – Naturalism – Pragmatism – Realism – Humanism – Existentialism.

**Unit-III**

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

**Unit-IV**

Education in the Indian Constitution.

Directive principles – Article 45, universal compulsory primary education – Responsibilities of the state and central governments regarding education, Amendments related to education, Human Rights.

Agencies of Education

- a) Home, community and mass media
- b) Continuing education and the concept of Open University system.

**Unit-V**

Education for changing Indian Society – concept of culture. Nature of culture, salient features of Indian culture. Transmission of culture and transformation of culture.

**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.
- iv. Higher Secondary Education – Vocational streams – Vocationalisation.

**Unit-VIII : Language Education**

Medium of Instruction at various levels- Claims of Tamil- Coining of Scientific and technical terms and words in Tamil Principles – Brevity – Accuracy – Simplicity and Precision – Language Principles – Electronic Tamil Dictionaries in Web – Tamil Wikipedia – Classical Tamil – Official Language – Instructional – Claims.

**Unit-IX**

## 1. Higher Education

Basic requirements for entering the university in India – Different types of Universities and their functions – autonomous colleges. Functions of UGC – Commissions – reports related to Higher Education – Dr. Radhakrishnan Commission – University Education Commission – Indian Education Commission (1964-66) - NEPE – 1986 – Iswari Bai Patel Committee.

## 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**

- 1) Dash. B.N. Trends and Issues in Indian Education, Delhi: Dominant publishers and Distributors, 2004.
- 2) Athaye, D.V Swami Vivekananda: A study, New Delhi: Ashish Publishing House.
- 3) Chaube, S.P Philosophical and Sociological foundations of education, Agra. Vinod Pusthak Mandir.
- 4) GrCwal and Gupta B.S Working with Community and Teacher Education, Bhopal: Modern Book Depot.
- 5) Joshi, NC Perception in Higher Education, New Delhi: Ashish – Publishing House, 1981.
- 6) Kundu C.L Adult Education Principles, Practice and Prospects, Delhi: Indian Publishers.
- 7) Masocarenhas Population Education for Quality on life .London: Oxford press.
- 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.
- 10) Ross, James S Groundwork of Educational Theory, London: Sterling Publishers.
- 11) Seetharaman, A.S Philosophies of Education, New Delhi : Ashish Publishers ,1980.
- 12) Taneja, VR Educational thought and practice, New Delhi: Sterling Publishers.
- 13) Taneja, VR Educational thought and practice, 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**

Nature and scope of Psycho – Pedagogy, Difference between psycho – pedagogy and educational psychology, Psycho-pedagogy in relation to childhood and adolescence.

### **Unit-II**

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

- a) Physical development
- b) Mental development
- c) Emotional development
- d) Social development
- e) Moral development
- f) and Personality development

Different stages – early childhood, later childhood and adolescence, Individual differences – meaning, determinants – implications for the class room teacher.

### **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**

Determinants of Behaviours – heredity and Environment – laws of Heredity – Experiments in favour of Heredity and Environment – educational implications of Heredity and Environment.

### **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**

Group dynamics – Characteristics of group types – Sociometry and Sociogram – Significance Leadership – types – training for leadership improving group relationship in the class.

#### **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
- 2) Ausubel, D.P., Educational Psychology, Holt, New York, 1968.
- 3) Bernard Harold, W., Psychology of learning and Teaching, McGraw Hill Book Co. New York (1954).
- 4) Cronbach, L.J., Educational Psychology, Harper, New York, 1960.
- 5) Crow & Crow, Educational Psychology, Eurasia Publishing House, New Delhi, 1973.

### **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**

Aims and Objectives of Education – Taxonomical objectives – Cognitive, Affective and Psychomotor Domains – Determinants of Curriculum – Types of Curriculum – Open – Hidden Curriculum – Objectives of 21<sup>st</sup> century Education – learning the treasure within – pillars of Education – Learning to know, learning to do, learning to live together and learning to be.

#### **Unit-IV**

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

#### **Unit-V**

Curriculum Design – Dimensions – Integration, sequence, continuity, Articulation and Balance-Sources for Curriculum Design.

#### **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**

Curriculum Evaluation – Approaches to Evaluation – Evaluation Models – Tyler’s Evaluation Model – Stake’s Congruence-Contingency Model. Stuffle Beams (CIPP) model.

#### **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

- 1) Saylor Galen, J and William Alanda Planning Curriculum School New York. Holt Richard and Winston Inc-1965.
- 2) Tarner, Dainal and Lanvel N.Tarner Curriculum Development and Educational Teachnology, New York. Mac Millan Pubhlishing company 1975.
- 3) Malla Reddy Mamidi and S.Ravishankar Curriculum Development and Educational Technology, New Delhi, Sterling Publishers Private Limited 1984.
- 4) Andrew pollard and pot Triggs reflective Teaching in Secondary Education. A Handbook for schools and colleges – London Britiths Library Cataloguing in Publication date 1997.
- 5) Allen C.Ornsteing and Franchie P.Hunkins Curriculum Foundation, Priciples and Issues, London – Prentice Hall International(U.K) Limited 1988.
- 6) UNESCO Publications Learning. The Treasure Within, UNESCO Publications, 1966.
- 7) Maitreya Balsara, Principles of Curriculum Reconstruction, Kanishka Publishers, Distributors .New Delhi – 1999.
- 8) Ghosh P.P.Effective Curriculum, Pointer Publishers, S.M.S High way, Jaipur, India – 2004.
- 9) Reddy R.S. Curriculum development for learning to live together, Rajat Publications Darya Gans, New Delhi – 2004.

### **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**

Aspects of child development – motor, intellectual, emotional and social concepts formation, and language development – The developmental theory of Jean Piaget – Cognitive stages and school education.

### **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.
- 3) Beyee, E.F., *Today and Tomorrow*, Tata McGraw Hill Ltd, New Delhi.
- 4) Dr. Bharti Mohapeatra, *Going to School in the Raj Primary Education in India (1803) with Focus on Orrissa*.
- 5) Case, J., The Role of a Teacher in the Nursery School, Pergamon Press.
- 6) Dootoe, J. and C. Sander, *Elementary School*.
- 7) Ellis D. Evans, *Contemporary Influences in Early Childhood Education*, Holt Rinehary and Winstor, Inc. New York.
- 8) Jerome, Leavitt, Nursery Kindergarten Education.
- 9) Hurlock Elizabeth, *Developmental Psychology*, Tata McGraw Hill Ltd, New Delhi
- 10) Joe, L. Forst, *Early Childhood Education Redis Covered Holt*, Rinchart and Winsten, Inc. London.
- 11) Mark J. Backer, Introduction to Exception Children.
- 12) Marti Herber, Emotional Problems and Development in Children, Academic Press, London
- 13) Pankajam, D. Pre-primary Education.
- 14) Pluckrose Hentry, Children in Primary School Harper and Row.
- 15) Rao, V.K. Handbook of Primary, Secondary and Higher Education, 1999.
- 16) Rajalakshmi and Muralidharan, A Guide for Nursery School Teacher.
- 17) Shanta Narulkar, Pre-basic Education.
- 18) William M. Crncekshenk, *Education of Exceptioanl 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**

Concepts – Education and technical education – Need and importance. Human resources development – skilled manpower – productivity – Vocational Education – Meaning and Definition.

### **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.

Abbot and wood report (1937) – Secondary Education Commission (1952 – 53) – Kothari Commission (1964 – 66) – Ishwarbhai Patel committee report (1977) – Malcolm Adiseshiah Committee report (1978) – Sabanayagam report (1978) Report of Kulandaisamy Group (1985) – National Policy on Education in the programme of action in Vocational Education (1986)

### **Unit-IV**

Work experience-concept – distinction between work experience and vocational education.

Basic education – concept – merits – Criticism, need and importance, scheme of multipurpose schools.

S.U.P.W. – Concept – Objectives – Selection of activities – programme-advantage.

### **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.

**Parctical Work**

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

**Reference Books**

- 1) Aggarwal, J.C. and s.p. Aggarwal, *Vocatinal Education*, Doaba House Publishers, New Delhi, 1987.
- 2) Aggarwal, J.C., *Marks in the History Modern Indian Education*, Indian Education, Vikas Publishing House Pvt. Ltd., New Delhi, 1994.
- 3) Secondary Education Commission (1952 – 53)
- 4) Kothari Commission Report (1964 – 66)
- 5) Sharma, A.P., *Contemporary Problem Education*, Vikas Publishing House Pvt. Ltd, New Delhi, 1984.
- 6) Tarun Rashtriya, *Vocational Education*, APH Publishing Corporation, New Delhi, 2005.

**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**

Nature and scope of educational administration – Definitions – Difference among management, organization and administration – components of the administrative process – management of things – human relations.

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.

Role of D.E.O's – Recommendations of IEC, 1964 – 66 – separation of administration from supervision.

**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, CIBE 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**

School and community – school – home partnership – parent teacher association – school community center – measures to win community support.

Problems of school finance-grants in – aid and other fees and endowments. Institutional planning – concept and scope-characteristics of good plan. Role of the Headmaster, D.E.O's and Extension service Department.

**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.
- 2) preparation of Time-table I. Class Time-table II. Master Time-table.

**Reference Books**

- 1) Frank G. Dicky, *Amiol of Alams & Basic Principles of Supervision*, Eurasia Publishing House Ltd. New Delhi.
- 2) Cannobell, Corbally, *Introduction to Educational Administration*, and Ramasayer Boson Allan and Bacon Inc.
- 3) Educationm Commission Report 1964 – 66.
- 4) Haggett Albert, *Practical School Administration II*, Linois Garrand Press.
- 5) Kochar, S.K. *Successful supervision and Inspection*, Sterling Publishers, New Delhi.
- 6) Kochar, S.K., *Pivotal issues in Indian Education*, Sterling Publishers, New Delhi.
- 7) Kochar, S.K., *Secondary School Administration*, Sterling Publishers, New Delhi.
- 8) Kochar, S.K., *Educational Administration*, Allied Publishers, New Delhi.
- 9) Dr. Mohamed Sharfkhan, *School Administration*, Teachers Publishers.
- 10) Raghunath Safya, *School Administration and Organization*, Dhannai Cai and Sons, New Delhi.
- 11) Secondary School Commission Report (1958) Education
- 12) Sindhu, K.S., *School Organisation*, Jaladhar City – International Publishers.
- 13) Mukerjee, L. *Secondary organization and Administration*, Acharya Book Dept.
- 14) Sindhu, K.S., *School Organisation and Administration*, Jalandhar City International Publishers.
- 15) Mort Paul, R., *Principles of School Administration Schools*, McGraw Hill.
- 16) Williams Stally, W., *Educational Administration of Secondary School*, Holt Rinehart.

**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 macro – 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**

- 1) Chandra, A & Shah, A. (1987), *Non-formal Education for All*, Sterling Publishers Pvt. Ltd., New Delhi.
- 2) Jayagopal, R. (1985). *Adult Learning a Psychosocial Analysis in Indian Context*, Dept. of Adult and Continuing Education, Clinics of Madras, Chennai.
- 3) Singh, R.P. (1979), *Non-formal Education – An Alternative to Formal System*, Bahari Publications Pvt. Ltd, New Delhi.
- 4) Singh, D.R., *Studies in Adult and Non-formal Education*, Commonwealth Publishers, 2001, New Delhi.
- 5) Vijayalakshmi, K., *Non-formal Education*, Discovery Publishing House, 1989, New Delhi.

**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)**

Concept – Working with word – creating a word file – Editing word document - inserting required information into a word document – Page setup –Formatting Drawing tables, figures etc – Use of clip arts – Spell check application – Printing a word document procedure – printer setup – Concept of work sheet/spread sheet working with excel, Selecting worksheet items – Using auto fill – adding and removing



rows and columns copying and moving information – creating and copying formulae – using functions formatting – statistical calculations – drawing graphs.

#### **Unit-IV : Microsoft (POWER POINTS, ACCESS)**

Using Basic commands – Use of templates – Creating and saving the prepared slides Developing a presentation for class room teaching – Editing procedure Designing the slides – Transitions – Animations – Inserting pictures, videos, sound and diagrams – Concept of database – Creating a File, Adding and Changing Information, Sorting, Searching and Printing – Meaning of the terms Queries, Forms, Records, pages Macros and Modules.

#### **Unit-V : Learning Through Computer**

Computer Assisted Learning – Definition Assumption -CAL programmes advantages of CAL – role of a teacher in CAL. Computer Managed Learning (CML) – Definitions major functions of CML – Educational Paradigm – The Instructional Paradigm – The Revelatory Paradigm – The Conjectural Paradigm – The Emancipatory Paradigm.

#### **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**

History of internet – Working of internet – Difference between internet and web Wireless internet – CDMA – GPRS technology – Internet protocols – Accessibility and retrieval of information – Email – Search engines and its applications Educational applications of internet.

#### **Unit-VIII : WEB Education**

Introduction to web – Meaning – concept – Fundamentals of World Wide Web (WWW) – Hyper text – Web operation – Document retrieval on the web – URL Anatomy of URL – Different web browsers – Browsing techniques – Educational web sites.

#### **Unit-IX : Basics of Electronic Infections**

Concept of electronic infections – Computer viruses – Meaning – Types of computer viruses – Trojan horses – Worms – Spreading of viruses – Preventive measures.

#### **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**

- 1) Allen Martin, Teaching and Learning with Logo Croon – Helm, iSydney, London, 1986.
- 2) Baker and Quellmaly, Educational Testing & Evaluation, Design, Analysis and Policy, Stage, Publication – 1980.
- 3) <http://www.cotse.comltools/steqa.htm>
- 4) <http://www.steqanos.com>
- 5) Rajasekar, S., *Computer Education and Educational Computing*, Neelkamal Publications Private Limited, Hyderabad, 2004

- 6) Rajasekar, S., *Computer Education*, Neelkamal Publications Private Limited, Hyderabad, 2006.
- 7) Stanley Pogrom, *Education in the Computer Age*, Sage Publication, 1983.
- 8) Steven Morose, *Basic Programming for Educations*, Prentice Hall, New Yorlc, 1990.
- 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 behavaviours 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**

Information center – organizing a center for personal educational, vocational guidance-Reference Books materials: Nature, Source, display and use.

#### **Practical Work**

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

#### **Reference Books**

- 1) Adams Jones, F., *Problem Incounselling*, MacMillam Co., New york.
- 2) Anastasi, A., *Differential Psychology*, MacMillam Co., New york.
- 3) Arbuckle Dugland, *Counselling in the Classroom*, Allyn & Bacon Inco.
- 4) Chauhan, S.S., *Principles and Techniques Guidance*, Vikas Publishing house Pvt.Ltd, New Delhi.
- 5) Crow and Crow, *An Introduction to Guidance Eurasia*, Publishing House, New Delhi.
- 6) Freeman, E.S., *Theory and Practice of Psychological, Testing*, Henry Holt, New Delhi, 1950.
- 7) Ralbert, E.C., *Introduction to Counselling*, McGraw Hill Co.
- 8) Indu Dave, *The Basic Essentials of Counselling*, Sterling Publishers Pvt. Ltd., New Delhi, 1983.
- 9) Jones, A.J., *Principles of Guidance*, Tata McGraw Hill, Book Co., New Delhi, 1969.
- 10) Medhi Baquer, *Guidance in Schools NCERT*, New Delhi.
- 11) Narayana Rao, S., *Counselling Psychology*, Tata McGraw Hill Publishing Co Ltd, New Delhi 1981.

- 12) Rogers Car, L., *Client Centred Therapy*, Houghton – Hiffin, Boston, 1951.
- 13) Supper, D.R., *The Psychology of Carrers*, Harrer, New York.
- 14) Traxier, *Techniques of Guidance*, Harper and Brothers, New York.
- 15) Tyler, L.E., *The Work of the Counsellor*, Appleton Century Crafters, New Delhi, 1962.

**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
- 2) a. Maps, b. Charts, c. Posters, d. Slides, e. Models
- 3) Scrap book (clippings from Newspapers, periodicals, Journals etc. relating to population, Brochures – published by the Government towards demographic education).

**Reference Books**

- 1) Ansely Bose, (ed.) *Population in India's Economic Development*, Vikas Publication House, Delhi, 1974.
- 2) Asha A. Bhende and Tharakanishkar, *Principles of Population Studies*, Himalaya Publishing House, Bombay, 1982.
- 3) Ashish Bose, *Social Statistics Health and Education*, Vikas Publishing House Pvt, Ltd., New Delhi, 1982.
- 4) Aykord, N.R., *Consequences of Deficiency Diseases*, WHO Basic Study No.24., 1973.
- 5) Chandrasekar, S., *Infant Mortality Population Growth and Family Planning in Indian*, George Allen and Unwin, London, 1972.
- 6) Devedas, R.P., *Nutrition in Tamilnadu*, Sangam Publishers, Madras, 1972.

- 7) FPAI, Population Education for the Younger Generation Report of the Proceedings of the Seventh, All India Conference of the FPAI at Manipal, 1971.
- 8) Ghosh, R.A., *Treatise on Hygiene and Public Health*, Scientific Publishing Company Inc., Calcutta, 1976.
- 9) John and Wider, et.al., Information Education and communication for Population at Family Planning – A Guide for National Action.
- 10) Literacy House, Functional Literacy and Family Life Planning Education, Andhra Mahila Sabha, Hyderabad, 1972.
- 11) Malagarkar, P.D. and V.A. Panadikar, *Population and Development*, Somaiya Publication Pvt, Ltd, Bombay, 1977.
- 12) Narayana Menon, The communication Revolution–India the Land and the People, National Book Trust, India.
- 13) Prasad, K.N., Problems of India's Economic Development National and Regional Dimensions, Sterling Publishers Pvt. Ltd., New Delhi, 1983.
- 14) Sharma, R.C., Population Resources Environment and Quality of Life, Dhanapal Kai & Sons, Delhi, 1988.
- 15) Swaminathan, M., *Essentials of Nutrition*, Vol. I and II. The Ganesh and Co., Madras, 1974.
- 16) United Nations, *The Determinants and Consequences of Population Trends*, Department of Economics, and Social Affairs, New York, 1972.
- 17) Vatsala Narain, and C.P. Prakasam, *Population Policy Perspectives in Developing Countries*, Himalays publishing House, Bombay, 1983.
- 18) Warren Thompson and David Lewis, *Population Problems*, McGraw Hill Book Co, New York, 1958.

#### **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**

Meaning – definition and use of strategies of teaching – Various strategies used by the teacher – lecture and lecture cum demonstration – workshop – supervised study – tutorial – field – study – Brain storming.

**Unit-IV**

Techniques of teaching – Microteaching – objectives – meaning – definition – phases – activities – components.

**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**

Meaning – Concept – scope-Educational Technology (ET) – Types of Education Technology – Uses of Education Technology in teaching – learning.

**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, film-strip. 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**

- 1) Allen, D, & Kevin, R., *Micro Teaching*, London Wesley Publishing Co., 1969.
- 2) Bose, C.R. & Ramachandran, *Educational Technology*, NCERT, New Delhi.
- 3) Dececo, J.P., *Educational Technology Teaching in Programmed Instruction*, Halt Rinhart & Winston Inc., New York, 1964.
- 4) Flanders, H.D., *Analysing Classroom Interaction*, Addison Wesley, London.
- 5) Glaser, R., *Teaching Machine and Prgrammed Learning Data and Direction*, Do N.E.A., Washington.
- 6) Jangira, N.K., *Core Teaching Silk Microteaching Approach*, NCERT, New Delhi, 1983.

- 7) Jangira, N.K., *Draft Workshop on Teaching Model*, NCERT, New Delhi.
- 8) Kulkarni, S.S., *A Hand Book of Programmed Learning*, CASE M.S. University, Publication, Baroda, 1963.
- 9) Sampath, K., *Introduction to Educational Technology*, Sterling Publishing Pvt. Ltd., New Delhi, 1981.
- 10) Sharma, *Programmed instruction – and instructional Technology*, International Publishing House, Meerut, 1982.

**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<sup>th</sup> and 20<sup>th</sup> 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**

Materials and methods for adult education, suitable learning materials – primers, teacher guides, work books – selection, preparation and use.

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**

- 1) Aggarwal, J.C.& S.P. Aggarwal, *Role of UNESCO in Adult Education*, Vikas Publication House Pvt. Ltd., New Delhi, 1982.
- 2) Chandra, A. & Shah, A., *Non-formal Education for All*, Sterling Publishing Pvt. Ltd. L – 10 Green, Part Extension New Delhi, 1987.
- 3) Devadas, R.P., *Planning and programme for Adult Education*, University of Madras, 1979.1
- 4) Edwin K. Town send Cobs, *Adult Education in Developing Countries*, Penrgamon Press Limited Headington Hill Oxford 30 BW, England, 1977.
- 5) Jayagopal, R., *Adult Learning Psycho – Social Analysis in Indian Context*, Department of Adult and Continuing Education, University of Madras, Chennai, 1985.
- 6) Kundu, C.L., *Adult Education*, Research Future Directions, Kurushetra University Kurushetra, 1988.
- 7) Mahanty, S.B., *Life-Long and Adult Education*, Ashish Publishing House, 8/81, Panjabibagh, New Delhi, 1988.
- 8) Singh, R.P., *Non-Formal Education – An Alternative to Formal System*, Bahari Publications Private Limited, New Delhi, 1979.

**Journals**

- 1) *Indian Journal of Adult Education*, Indian Education Association No.17, Indraprastha Estate, New Delhi.
- 2) *IAEA Newsletter*, Indian Adult Education Association, New Delhi.

**COURSE-IV : ELECTIVE**  
**150. ENVIRONMENTAL EDUCATION**

**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 class room 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**

Environment – definition – Nature and cause of environmental problem. Historical setting of environment education – Environmental Education at school level, instructional objectives of environmental education at primary secondary and Tertiary levels.

**Unit-II**

Ecological principles – Nature balances – nature of ecosystems – forest – pond, sea – energy in eco-systems, food chain – food web – bio magnification. Bio-diversity – conserving bio-diversity – loss of bio-diversity and loss genetic diversity.

**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**

Conventional and Non-conventional energy sources. Bio-gas, bio-mass, solar, coal mini-hydro and major hydropower projects – Nuclear power environmental impacts – Nuclear power plants and health hazards in Tamil Nadu.

**Unit–IX**

Teaching – learning strategies for environmental education, formal, Non-formal approaches learned oriented activities which are 1. Value oriented, 2. Inter – disciplinary. 3. Problem centered, 4. Community oriented and 5. Present and future oriented.

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**

- 1) Aggarwal, J.P. and Rajput, J.S. (1973) *Functions aspects of Science Education in Rural Schools*; Quest in Education 51, 218.
- 2) Bhattacharaya, Shakuntala (1981). Practical Laboratories techniques for the Teaching in Biology Education Bankak of UNESCO ROEAP.
- 3) Bhattacharaya, Shkla (1980) *Corrservation – what means to use* (and illustrated talk) at Vigyan Bhavan.
- 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.)
- 5) *Teaching of Science in Secondary School* (content Cum – Methodology) NCERT, New Delhi (in Press). Experimental Addition developed in collaboration with the British Council.
- 6) The Curriculum for the ten years school and frame work (1975) NCERT, New Delhi.
- 7) The Curriculum Guide on Nutrition /Health Education and Environment Sanitation in Primary School, NCERT New Delhi, 1976.
- 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.
- 10) One earth – one future-silver and Defires affiliated Fast – West Press, Delhi.

**COURSE-IV : ELECTIVE**  
**178. TEACHER EDUCATION**

**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**

Content of teacher education programmes – Theory and Practice-Methods of Instruction group methods – activity centered, Micro teaching, internship in teaching – meaning – objectives of programmes.

**Unit-V**

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

**Unit-VI**

Need for in – service education – for teachers – objectives – techniques of in – service education – functions of NCERT, SCERT and Extension department.

**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**

Comparative Education – teacher Education in U.K. U.S.A. and Russia.

**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**

- 1) Arun K. Gupta, *Teacher Education Current Problems and Prospectives*, Sterling Publishers, New Delhi.
- 2) Chaurasia, G., *Nes Era in Teacher Edcuation*, Sterling Publishers, New Delhi.
- 3) Dikshit, S.S., *Teacher Education in Modern Demoeracies*, Sterling Publishers, New Delhi.
- 4) ICSSR, *In Service Education for Teacher Education*, New Delhi, 1968.
- 5) *Ministry of Education*, Education Commission Report Ministry of Education, New Delhi.
- 6) *Ministry of Education*, Secondary Education Commission Report Ministry of Education, New Delhi.
- 7) Mursell, J.L., *Successful Teaching*, McGraw Hill, New Delhi.
- 8) Singh, R.P., *Studies in Teacher Education – An Overview*, Bharat Publishers, New Delhi.
- 9) Ryans, D.G., *Characteristics of Teacher* Washington D.C. American Council of Education, 1970.

**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**

Human being – Yogic View – Five bodies: Physical, etheric, Emotional, Mental and Astral – The Nodies – The Chakkaras – The Kundalini.

**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**

Value Crisis – Factors – Family, peer group, Mass media and Nature.

**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.
- 2) Passi, B.K. and P. Singh, *Value Education*, Agra Psychological Corporation, 1999.
- 3) Ruhela, S.P. *Human Values and Education*, Sterling Publication, New Delhi, 1986.
- 4) Subramanian, K. *Value Education*, Madurai Rawana Publications , 1990.
- 5) Swadeser Mohan, *Value Education*, Agra Modern Printers, 1989.
- 6) Brhama Kumaris Iswariya Vishwa Vidyalaya Practical Medication, Rajasthan, 1996.
- 7) Govindan, M., *Babajis Kriya Hatha Yoga*, Babaji's Kriya Yoga Orde of Acharayas, Chidambaram, 1997.

- 8) *Sri Krishna Essence of Pranayama*, Puna Kaivalaydharma Ashram, 1996.
- 9) Swami Kavalyananda, *Asanas*, Pune Kaivalaydharma S.M.Yoga Mandir Samiti, 1993.
- 10) Swami Vivekananda, *Raja Yoga*, Calcatta Advaital Ashrama Mayavati, 1999.
- 11) Tellers Shirley, *Glimpse of the Human Body*, Vivekananda Kendra, Prakasham Trust, Bangalore, 1998.
- 12) Thirumoolar, *Siddhar Thirumandiram*, Babaji's Kriya Yoga Order of Acharyas, Chidambaram, 1999.
- 13) Tiwari OM Prakash, *Asana Why and How*, Kaivsyasharma SMYM Samiti, New Delhi, 1991.
- 14) Vivekananda Kendra, *Science of Emotions*, Madras, 1994.
- 15) Vivekananda Kendra Prakasham Trust *Yoga Asanas Pranayama*, Madras Kriyas (Chennai: 1996)
- 16) Vivekananda Kendra Prakasham Trust Yoga, *The Science of Holistic Living*, Chennai, 1996.
- 17) Ghose, D.N., *A Text book of Value Education*, Dominant Publishers and Distributors, New Delhi, 2005.
- 18) Shukla, R.P., *Value Education and Human Rights*, Sarup and Sons. New Delhi. 2004.

#### **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**

Universal Declaration of human Rights 1948 – International covenant on Economic, Social and Cultural Rights, 1966 – International covenant on Civil and political Rights, 1966 – Indian constitutional provisional preamble-fundamental Rights – Duties – Directive principles of state policy.

**Unit-III**

Education for citizenship – duties and responsibilities of a citizen in Democracy – Right for Education – Right to work – Right to Vote-Role of teacher.

**Unit-IV**

Human rights Education and its need in teacher education – UNESCO 1974 recommendation concerning education for international Co-operation and peace education for human rights and fundamental freedom – National policy on education on Human Rights Education.

**Unit-V**

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

**Unit-VI**

Rights of the child Basic Rights, Convention on the rights of the child(CRC) – present status of Indian Children – Health and Nutrition – Status of the children – gender discrimination, socially disadvantaged children – street children, orphans child labourers, protective measures – constitutional provisions.

**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**

Protection of Human Rights – National and international organization – National and State Human Rights Commission – Human Rights Courts.

**Unit-IX**

Agencies and organization for Human Rights Education – Role of Mass – Media – Citizens Forums, clubs and Non-governmental organization, Educational institutions offering Human Rights Education.

**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**

- 1) Chatrath, K.J.S. (Ed), *Education for Human Rights and Democracy*, Indian Institute of Advanced Study, Rastrapathi Niwas, Shimla, 1998.
- 2) Dev Arjun, Dev, *Human Rights – A Source Book*, National Council of Educational Research and Training, New Delhi, 1995.
- 3) Dewey, John, *Democracy and Education*, MacMillan, New York, 1963.
- 4) Henkin Louis, *The Rights of Man Today Boulder*, Mestview Press, Chapters 1 & 3, 1978.
- 5) Jois, M.R., *Human Rights and Indian Value*, NCTE, Revised, New Delhi, 1998.
- 6) Mohantray, J., *Human Rights Education*, Deep & Deep Publications Pvt.Ltd., New Delhi, 2000.



- 7) Rocovertson, *Human Rights in the World, Today*, Humanities Press, New York, 1972.
- 8) Sehagal, B.P.S., *Human Rights in India: Problems and Perspectives*, Deep & Deep Publications Pvt.Ltd., New Delhi, 1999.
- 9) Singh, *Human Rights Education – A Transformative Perspective*, Indian Journal of Human Rights, 1 (1):137 – 144, 1997.
- 10) United Nations, “Education : A Tool for the Elimination of Human Rights Violations”, E(1994)/110 – 1994.
- 11) Patill, V.T., *Human Rights*, Third Millenium Vision, Author’s press, New Delhi.
- 12) Sakeena, K.P., *Human Rights*, Fifty Years of India’s Independence, Gyan publishing House, New Delhi.

#### **COURSE-IV : ELECTIVE**

##### **189. EVALUATAION ELEMENTS OF STATISTICS AND REASEARCH**

#### **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**

Taxonomies of educational objectives – The cognitive domain and its classification – The affective domain and its classification. – The psychomotor domain and its classification.

##### **Unit-III**

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

##### **Unit-IV**

Testing procedure-oral, Written, performance, etc. Observation and rating techniques – systematic observation – rating scales – check lists – anecdotal records – cumulative record – Projective Techniques – Ink Blot – T.A.T – Sociometric techniques – self report techniques – interview and inventories.

**Unit-V**

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

**Unit-VI**

Various types of test items – essay, short answer, completion, matching, alternative response items multiple choice-Characteristics of good measuring instrument – objectivity validity, reliability, practicability – establishing validity and reliability – Test construction – Blue print – item writing – item analysis – scoring, interpretation and follow up.

**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**

Normal distribution – Skewness, kurtosis, correlation – meaning and interpretation – coefficient of correlation – rank difference method.

**Unit-X**

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

**Reference Books**

- 1) Bloom, Benjamin, S. et.al. (Ed.), *Taxonomy of Educational Objectives – Handbook I Cognitive Domain* 1956.
- 2) Dandekar, W.N. *Evaluation in Schools*, 1971.
- 3) Gronlund, Norman, E., *Measurement and Evaluation in Teaching*, The Macmillan Co., New York, 1965.
- 4) Gronlund, N.E., *Stating Behavioural objectives for Class Room Instruction*, 1970.
- 5) Krathwohl David, R., et.al. *Taxonomy of Education Objectives – Handbook-II, Affective Domain*, David Mckey, New York.
- 6) Lindvall, C.M Co. Inc 1961, *Testing and Evaluation – An Introduction*, 1977.
- 7) Patil, N.K., *Evaluation and Unit Test*, New Delhi.
- 8) *Best John, W. Research in Education*, Prentice Hall of India. New Delhi, 1989,
- 9) Barnes John, B. *Educational Research for Class Room Teachers*.
- 10) Sukia, S.P., *Elements of Educational Research*, Allied Publishers, Bombay, 1963.
- 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**

- Theory, Concept, Nature, Process.
- 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.
- Implications of emerging. Trends in Educational Technology for teacher preparations, pre-service, in-service.

**Reference Books**

- 1) Bhatt. B.D. Prakash Ravi, *Modern Encyclopedia of Educational Psychology* (Volume 1,2 & 3), Kanishka Publishers Distributors, New Delhi, 1994.
- 2) Dale Edgar, *Audio Visual Methods in Technology*, Drvden Press Inc. New York, 1955.
- 3) Kumar K.L. *Educational Technology*, New Age International Publishers, Nell Delhi, 1966.
- 4) Marilyn Nickson, *Educational Technology – A Systematic Approach for Teachers*, Ward Lock Educational Limited, London, 1971.
- 5) Ruhela, S.P., *Essentials of Educational Technology*, Indian Publishers' Distributors, New Delhi, 1999.
- 6) Sampath, K., Panirselvan A. Santhanam, *Introduction to Educational Technology*, Stering Publishers Private Limited, New Delhi, 1981.
- 7) Vanaja, S. & S. Rajasekar, *Educational Technology & Computer Education*, Neelkamal Publications Pvt., Hyderabad, 2006.
- 8) Vashist, S., *Research on Educational Technology*, Book Enclave Publisher, Jaipur, 1997.

**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**

Disaster – Disaster Management – Disaster Management Education – Meaning Concepts and Definitions – Environmental Hazards and Disasters.

**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**

MAN – Made Diasters – Soil Erosion – Chemical Hazards – Nuclear Explosion, Sedimentation and Environmental Problems – Biological Hazard – Population Explosion – Factors, Causes and Control Measures.

**Unit-IV**

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

**Unit-V**

Inter-relationship between Disaster and development – Factors affecting Vulnerabilities- Impact of Development Projects – Dams, Embankments, Changes in Land Use.

**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**

Disaster Management – An integrated approach for Disaster Preparedness, Mitigation and Awareness. Mitigation Institutions – Meteorological Observatory – Seismological Observatory – Industrial Safety Inspectorate.

**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**

- 1) Alexander David, 2000. 'Introduction in Confronting Catastrophe', Oxford University Press.
- 2) Document on World Summit on Sustainable Development, 2002.
- 3) Disaster Management, Act, 2005, Government of India, New Delhi.
- 4) Government of India, National Disaster Management Policy, 2009.
- 5) Gupta Anil K. Sreeja, S. Nair, 2001. Environmental Knowledge for Disaster Risk Management, NIDM, New Delhi.
- 6) Kapur, Snu et.al. 2005. Disasters in India Studies of Grim reality, Rewat Publishers, Jaipur.
- 7) Japur Snu, 2010. Vulnerable India: A Geographical Study of Disaster, IIAS and Sage Publishing, New Delhi.

**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, trends and approaches of teaching mathematics
- 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 mathematics
- develops scientific/Positive attitude towards the teaching and learning
- appreciates the contribution of the subject to the teaching and learning.

**COURSE CONTENT****Unit–I**

Nature of Mathematics – Logical structure, symbolism, abstractness – precision – simplicity – vividness – Universal character.

**Unit–II**

History of Mathematics – Need and importance-contributions of Newton, Gauss, Lobachevsky, Aryabhata, Brahmagupta and Ramanujam.

**Unit-III**

Dynamic methods of teaching mathematics – Seminar, symposium, discussion methods – merits and demerits.

**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**

Aptitude-concept – aptitude and intelligence-aptitude for learning mathematics – aptitude treatment interaction – individual differences.

**Unit-VII**

Interaction analysis – FIAS – coding and analysis – effects of analysis – professional self – development – Classroom Climate.

**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*.
- 2) Cooney, Dacies Hendeuar, *Dynamics of Teaching Secondary School, Mathematics* H.M. Company, Boston.
- 3) Fletcher, T.G., *Some Lessons in Mathematics*, O.U.P. Cambridge.
- 4) Kanpur, J.N., *Nature of Mathematics Ayra Book Depot*, New Delhi.
- 5) N.C.E.R.T., *Booklets related to Mathematics Education*.

**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**

Internet and its applications – Meaning – Working of Internet – e learning – World Wide Web – Teleconferencing – Satellite-EDUSAT.

Individualized instruction. Need and importance-Characteristics – Principles. Programmed instruction – Personalized system of instruction (PSI) – Computer assisted instruction (CAI) advantages and disadvantages.

### **Unit-VI**

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

### **Unit-VII**

Technology in education. selecting and using media – Media. selection – Procedures – Factors in media selection – Educational implications of improvisation of science equipment.

### **Unit-VIII**

Diagnosing students difficulties in learning – providing suitable remedial measures.

### **Unit-IX**

Review of units in Physics. Need and Importance of reviewing lessons. Characteristic of a good assignment – Research in Physics Education.

### **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**

- 1) Boulind, H.E., *The teaching of Physics in Tropical Secondary School London*, Oxford University Press.
- 2) Carin, A. and Sund, R.B., *Discovery Teaching in Science*, Columbus, Charles E. Merrill Books.
- 3) Dale, E.D., *Audio Visual Methods Teaching*, Dryden Press, New York.
- 4) Hass, K.B. and H.K. Andraker, *Preparation and Use of Visual Aids*, Prentice Hall Ltd., New York.
- 5) Less Obwern and Hoffman, *Modern Science Teaching*, New York.
- 6) Sharma, R.C., *Modern Science Teaching*, Dhanpat Ra and Sons, New Delhi,
- 7) Saunder, H.N., *The Teaching of General Science in Tropical Secondary School*, UNCESCO, Series London.
- 8) Vaidya, N., *The impact of Science*, Oxford and IBH Pune, 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**

Psychological basis of science Education, contributions of Piaget – Stages in intellectual growth, Gagne's model 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**

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

Internet and its applications – Meaning – Working of Internet – e learning – World Wide Web – Teleconferencing – Satellite-EDUSAT.

**Unit-VI**

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

**Unit-VII**

Technology in education. Selecting and using media – Media selection procedures – factors, in media selection – Educational implications of improvisation of science equipment.

**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**

- 1) Boulind, H.E., *The Teaching of Physics in Tropical Secondary School*, Oxford University Press, London.
- 2) Carin, A. and R.B. Sund, *Discovery Teaching in Science*, Columbus Charies E. Menil Books.
- 3) Dale, E.D., *Audio Visual Methods Teaching*, Dryden Press, New York.
- 4) Hass, K.B. and H.K. Packer, *Preparation and Use of Visual Aid*, Prentice Hall, Ltd., New York.
- 5) Hess Obowrn and Hoffman, *Modern Science Teaching*, Macmillian, New York.
- 6) Sharma, R.C., *Modern Science Teaching*, Dhanpat Raji & Sons, New Delhi.
- 7) Saunders, H.N., *The teaching of General Science in Tropical Secondary Schools*, UNESCO series Oxford Uni. Press, London.
- 8) Vaidaya, N., *The Impact of Science*, Oxford, IBH Pub., New Delhi.

**COURSE-V(A) : OPTIONAL COURSE****155. INNOVATIONS, TRENDS & APPROACHES OF TEACHING ZOOLOGY (HSL)****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.

**COURSE 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**

Psychological basis of science education science teaching & learning – contribution of Piaget – stages of intellectual growth – Gagne's models of sequential learning – Bruner's model of concept learning – their 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**

Methods and materials of Zoology teaching experimental learning – mastery learning in Zoology learning – instructional modules – environment based zoology learning – Zoology clubs – field trips – science fairs and exhibitions.

**Unit-V**

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

**Unit-VI**

Internet and its applications – Meaning – Working of Internet – e learning – World Wide Web – Teleconferencing – Satellite-EDUSAT

Educational technology in Zoology teaching – programmed learning – computer assisted instruction – mass media for Zoology learning.

**Unit-VII**

Dynamic methods – team teaching – group discussion – seminar, symposium – panel discussion – brain storming – circles of knowledge-their implication on Zoology teaching.

**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.
- 2) Das, R.C., *Science Teaching in Schools*, Sterling Publishers Pvt. Ltd., Bangalore.
- 3) Ganong, W.E., *The Teaching Botanist*.
- 4) Green, T.L., *Teaching of Biology in Tropical Secondary School*, Vol. X of the UNESCO Hand Book Oxford University Press, London.
- 5) Gratman & Suksin, *Gene Action*, Eastern Economic Edition.
- 6) Heiss, et.al. *Modern Science Teaching*.
- 7) Hoff Arthur, G., *Science Teaching*.
- 8) Miller & Blaydes, *Methods and materials for teaching Biological Science methods in Biology*.
- 9) Morhai, et.al. *A Source Book for the Biological Science*.
- 10) Munzer and Brand, *Teaching Science Through Conversation*
- 11) Nair, C.P.S., *Teaching of Science in our School* Chand & Co Pvt. Ltd., New Delhi.
- 12) Narendra Vaidy, *Science Teaching for the 21<sup>st</sup> Century*, Deep and Deep Publication, Pvt Ltd, New Delhi.
- 13) Ratho, T.N., *Emerging Trends in Teaching of Biology*, Kanishka Publishers, New Delhi.
- 14) Saunders, H.N., *The teaching of General Science in Tropical Secondary Schools*, Oxford University, London.
- 15) Sharma, R.C., *Modern Science Teaching*, Dhapat Rai Publishing Company Private Limited, New Delhi.
- 16) Uttamkumar Singh, *Teaching of Science*.
- 17) Yadav, M.S., *Modern methods of Science Teaching in Secondary Schools*, Anmol Publications Pvt Ltd, New Delhi.

**COURSE-V(A) : OPTIONAL COURSE****156. INNOVATIONS TRENDS & APPROACHES OF TEACHING HISTORY (HSL)****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.
- 2) Making of History. How history is written collection of sources – Documents – their – authenticity and Historiography.
- 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)
- 3) The development of History curriculum in Tamilnadu the principles, problems and prospects – Critical analysis of existing Higher Secondary History Syllabus.
- 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**

Research in History Education – Need for Research in History Education – Research Trends.

**PRACTICAL WORK**

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

**Reference Books**

- 1) Barrens and Harryelumer , *A History of Historical Writing*, New York, 1963.
- 2) Busrston, W.H., *Principles of History Teaching*, Methuen & Co. Ltd., London, 1963.
- 3) Chaudhary, K.P., *The Effective Teaching of History*, N.C.E.R.T., New Delhi.
- 4) Gate, V.D., *Teaching of History*.
- 5) Ghosh, K.D., *Creative Teaching of History*, Oxford University Press, Mumbai, 1951.
- 6) Gooch, G.P., *History and Historians in the 19<sup>th</sup> Century*, London, 1961.
- 7) Hill, C.P., *Suggestions on the Teaching of History*.
- 8) Kochhar, S.K., *Teaching of History*, Sterling Publishers Private Limited, New Delhi, 2003.
- 9) Majumdar, R.C., *Historiography in Modern India*, Bombay, 1979.
- 10) Mursell, J.L., *Successful Teaching*, McGraw Hill, New York, 1946.
- 11) Sheik Ali, B., *History its Theory and Method*, The Macmillan Company of India Limited Madras, 1978.
- 12) U.N.E.S.C.O., *Better History Text Book*.
- 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, trends and approaches of teaching economics at higher secondary level.

- applies the knowledge of the innovations, trends and approaches in actual class room 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-III**

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**

Evaluation in Economics – Principles of procedures of construction of test items – Types – for enriching teaching – Learning process.

### **Unit-VIII**

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

### **Unit-IX**

Reviewing in Economics – Principles – Characteristics – methods – Techniques of using different types of Reviewing.

### **Unit-X**

Assignment in Economics – principles – Importance-Types – Techniques of using – Individual – Group – Project assignment suitable for learning different economics concepts.

**Practical Work**

- 1) Developing diagrams and graphs for a particular economic data.
- 2) Conducting economics surveys – procedures.

**Reference Books**

- 1) Keith Lumsden, *New development in the Teaching of Economics*, Prentice Hall the Engle Wood, New Jersey 1967.
- 2) Knopf and Keynon, *A The Teaching of Elementary Economics*, James & Status Holt Rinehart and Winston, New York, 1960.
- 3) Amita Yadav, *The Teaching of Economics*.
- 4) Vakil, *Teaching of Economics*.
- 5) *Journal of Economic Education*.
- 6) Vedanayagam, *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**

Introduction – scope and definition of commerce study – importance and meaning of commerce education – Commerce-Economics – their mutual relationships – Major divisions of commerce-Trade, Transport, Warehousing, Banking, Insurance, Advertising, Accountancy and Auditing.

**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**

Evaluation in commerce-Objective Based Evaluation (OBE) – Different types of tests – Diagnostic and remedial measures – Achievement test, Prognostic test, construction and standardization of an achievement test – Test items – and their importance-Formative and Summative Evaluation.

**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**

- 1) Ebel. Rober, L. *Measuring Educational Achievement*, Prentice Hall International, Inc. USA, 1965.
- 2) Kochhar, S.K., *Methods and Techniques of Teaching*, Sterling Publishers, New Delhi, 1992.
- 3) Nagarajan, K.L., *Principles of Commerce and General Commerce Knowledge*, S.Chand & Company Ltd, New Delhi, India, 1977.
- 4) Osuala Esogwa, *Business Education Principles and Practices*, Anu Books, Meerut, India, 1987.

**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**

Method and materials of Botany teaching – experimental learning – mastery learning in Botany – instructional modules – environment based Botany learning – Botany clubs – field trips – science fairs and exhibitions.

**Unit-V**

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

**Unit-VI**

Internet and its applications – Meaning – Working of Internet – e learning – World Wide Web – Teleconferencing – Satellite-EDUSAT

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

**Unit-VII**

Dynamic methods – team teaching – group discussion – seminar, symposium – panel discussion – brain storming – circles of knowledge-their implications of Botany teaching.

**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**

- 1) Chauhan, S.S., Innovations in Teaching Learning Process, Vikas Publishing House Private Ltd., 1995.
- 2) Das, R.C., *Science Teaching in Schools*, Sterling Publishers Private Ltd., Bangalore, 1990.
- 3) Yadav, M.S., *Modern Methods of Science Teaching in Secondary Schools*. Ammul Publications Pvt. Ltd., New Delhi, 2000.
- 4) Narendra Vaidya, *Science Teaching for the 21<sup>st</sup> Century*, Deep & Deep Publication, Pvt Ltd., New Delhi, 1999.
- 5) Nair, C.P.S., *Teaching of Science in Our School*, Chand & Co., Pvt Ltd., New Delhi.
- 6) Ratho, T.N. and Raviprakash, *Emerging Trends in Teaching of Botany*, Kanishka Publishers, Distributors 4697/5 – 21, Ansari Road, Daryagij, New Delhi, 1996.
- 7) Sharma, R.C., *Modern Science Teaching*, Dhanpat Rai Publishing Co. Pvt. Ltd., New Delhi, 2000.

**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

- i. principles to be observed in framing a curriculum
- ii. components of a curriculum
- iii. organization of subject matter – concentric, topical, unit approaches
- iv. Computer in the curriculum

### **Unit-IV**

Use of Computer in education

- i. Conceptions in education
- ii. Criteria for determining appropriate uses
- iii. Planning for instructional uses of micro computers.
- iv. Planning for administrative uses of computers.
- v. Policy and research implications.

### **Unit-V**

Educational technology

- i. Micro teaching: teaching skills – micro – teaching cycle-micro – teaching components – planning a micro – episode-organization.
- ii. Programmed instruction: Principles – concept – types – advantages and disadvantages.
- iii. Team – teaching: definition – concept – objectives – advantages and disadvantages.
- iv. Field trips: objective-concept – organization advantages and disadvantages.

### **Unit-VI**

Internet and its applications – Meaning – Working of Internet – e learning – World Wide Web – Teleconferencing – Satellite-EDUSAT

- i. Evaluation of Teachers
- ii. Rating by superiors or colleagues
- iii. Evaluation by pupils
- iv. Self evaluation
- v. Comparing performance with lesson plan
- vi. 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**

- 1) Allen Martin, *Teaching and Learning with LOGO* Cromm Helm, London, 1980.
- 2) Balagursamy, *Programming in Basic*, THN, Delhi.
- 3) Davis, *Computer Today*, McGraw Hill Delhi.
- 4) Gotstried, *Programming 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 matter – 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**

- 1) Beales, A.C.F., A Guide to the Teaching of History in Schools.
- 2) Bning and Bining, Teaching of Social Studies in Secondary School.
- 3) Briault, E.W.H. and D. Shave, *Geography in and Out of School*.
- 4) Ghate, D.D., Teaching of History.
- 5) Brick, C.D.J., An Experiment to Teaching Geography.
- 6) Chatterjee, *National Atlas of India*, Delhara Dun Survey of India Atalas.
- 7) Chose, K.D., Creative Teaching of History.

- 8) 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.
- 12) Happed, F.C., The Approach of History.
- 13) Hasluch, E.L., The Teaching of History.
- 14) Hill, C.P., Suggestions for the Teaching History, UNESCO.
- 15) Kocharr, S.K., The Teaching of Social Science.
- 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.
- 21) Kamana, S.D., T.P. Lamba, C.R. Saxeno and V. Murthy, *Teaching of Civics 1688 – Nai Sarak*, Delhi.
- 22) Saiyidain, K.G. Education for International Under – Standing, Hind Kitabs, Bombay, 1948.
- 23) Thirtha, N.V., *National Integration*, University Publishers, Jullundur, 1964.
- 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**

Aims and objectives of teaching English at Secondary level – with special Reference Books to Bloom's taxonomy. Objectives based instruction at Secondary Level.

### **Unit-IV**

Methods of Teaching English – Bilingual method – Grammar Translation Method – Direct Method and Substitution Method.

Approaches in teaching English – Structural approach – Situational approach.

Programmed instruction – Concept – Type-Advantages and disadvantages.

### **Unit-V**

Teaching of Prose-Detailed – Non-detailed – Acquiring Vocabulary – Active-Passive Vocabulary – Teaching of poetry – Comprehension and appreciation – Teaching of Grammar – Prescriptive-Descriptive-Formal – Functional – Deductive-Inductive.

### **Unit-VI**

Development of language skills – LSRW – Oral – Comprehension – Drill – Kinds of Drill – Practice. Reading – Intensive-Extensive-Types – Skimming, Scanning and writing – Legibility, simplicity, capitalization, punctuation – Dictation.

### **Unit-VII**

Micro teaching – meaning – definition – procedure-Micro cycle-Teaching skills – Set induction – Stimulus variation – Reinforcement.

### **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**

- 1) Allen, W.S., *Living English Structure*, Longmans, 1954.
- 2) Aslam Mohammad, *Teaching of English a Practical Course for B.Ed.*, Students, Foundation Books, New Delhi, 2003.



- 3) Billows, F.L. *Techniques of Language Teaching*, Longmans, 1964.
- 4) Doff Adrian, *Teach English – A Training Course for Teachers*, Cambridge university Press, Cambridge, 1995.
- 5) Elizabeth, M.E.S. and D. Bhaskara Rao, *Methods of Teaching English*, Discovery Publishing House, New Delhi, 2004.
- 6) Frisby, A.W., *Teaching of English, Notes and Comments on Teaching English*, Longman, 1995.
- 7) Ganesh Bagchi, *Teaching Poetry in Schools and Colleges*, T.R. Publilcatiols, Madras, 1994.
- 8) Gurvrey, P. *Teaching of English as a Foreign Language*, OUP, 1967.
- 9) Hill, L.A., *Teaching of Structural Words and Sentence Pattern*, ELBS & OUP, 1972.
- 10) Hornby, A.S., *Guide to Patterns and Usage in English*, Oxford University Press, 1993.
- 11) Hornby, A.S., *Guide to Patterns and Usage in English*, Oxford University press, 1993.
- 12) Hornby, A.S., *Advanced Learners Dictionary Current English*, OUP, 1975.
- 13) Jones Daniel, *English Pronouncing Dicctionary*, Dent, 1948.
- 14) Krishnaswamy, *Modern English Grammar Compositition*, Macmillan, 1975.
- 15) Krishnaswamy, N. and T. Sriraman, *English Teaching in India*, T.R. Publications, Madras, 1994.
- 16) Krishnaswamy, N., *Teaching English Grammar*, T.R. Publications, Madras, 2000.
- 17) Morris, I., *The Art of Teaching English as Living Language*, MacMillan, 1954.
- 18) Mowla Shaikh, *Techniques of Teaching English*, Neelkamal Publications Private Ltd., New Delhi, 2004.
- 19) Mowla Shaikh, *Methods of Teaching of English*, Neelkamal Publications Private Ltd., New Delhi, 2004.
- 20) Palmer, *The Scientific Study and Teaching of Language*, OUP, 1960.
- 21) Pandey, K.P. and Amita, *Teaching of English in India*, Vishwa Vidyalaya Praksasham, Varanasi, 1998.
- 22) Richards, J.C., *Approaches and Methods in Language Teaching*, Cambridge Universtiy Press, Cambridge, 2002.
- 23) Titus, P., *Remedial English*, NCBH , Madras, 1995.
- 24) Titus, P., *Progressive English Usage*, NCBH, Madras, 1994.

### **COURSE-V(B) : OPTIONAL COURSE**

#### **190. CONTENT AND METHODODOLOGY 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 .
- develops interest in knowing recent developments in the Content and methodology 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**

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.

Dravidian Language – Tamil Language – High Level Language – Independent Language – Classical Language Reasons – Other Classical Languages in the world – Tamil – First Indian Classical Language – Interferences of other Languages in Tamil – Service of Parthimar, Kaligner and Maraimalai Adigal to Classical Tamil.

#### **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**

Speaking – Oral work – Importance of oral work – Emphasis on clear and correct speech – The aims of oral work – types of oral work suitable to the stage-nursery rhymes, action songs, story telling, dialogues – teaching correct pronunciation. Need for repetition – the use of individual and group drill – recitation of prose and poetry – dialogues, little men speeches, narration, dramatization, description, and discussion.

Reading – creating interest in reading – Choice of readers and suitable topics – Different methods of teaching reading – the alphabet method, look and say method, the sentence method – their merits and demerits – loud reading – recitation lesson – place of reader – emphasis on silent reading – gradual development of independent reading – intensive and extensive reading – class – school – libraries.

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

composition oral to written step in the development of composition – Speech and beauty of writing – spelling – types of mistakes in spelling – remedial measures – spelling games – dictation – punctuation – correction of people’s written work – planning – remedial work.

#### **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 o vocabulary. Teaching of Non-detailed texts – aims of teaching Non- detailed, introduction to library work, reading – independent study.

Readers: The purpose of the text book – Characteristics of good detailed and Non-detailed texts.

#### **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**

Testing and Evaluation – Objectives for language teaching – their specification – their relations to testing – memory based tests – disadvantages – different types of questions – construction of a test, selection of questions – balancing objectives – Scoring key and marking scheme-question bank.

#### **Practical Work**

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

#### **Reference Books**

- 1) Bloomfield, *An Introduction to the Study of Language*, George Allen & Unwin Ltd., London, 1962.
- 2) Binhnupada Panda, *Teaching of Mother Tongue*, Mayar Publication, 1982.
- 3) Govindarajan, M. *Nartamil Payitrum Nonkamum*, Muraigalum, Thenmozhi Pathipagam, 1982.
- 4) Hues, A.G. *Katralum Karpithalum*, Orient Longman, 1952.

- 5) John D. Turne, *Language Laboratory*, University of London Press Ltd. 1942.
- 6) Ryburn, W.M., *Suggestions for the Teaching of the Mother Tongue*, Oxford University Press, London, 1950.
- 7) Subbu Reddiar, *Tamil Payitrum Murai*, Shanmugam Press & Manivasagra Noolagam, Chidambaram, 1957.
- 8) Thimnn, I.C., *Teaching Language*, George, G. Harrap & Co., Ltd. London, 1955.
- 9) Thirumalai, M.S., *Tamil Karpithal of Moshi Karpithal*, Manivasagar Noolagam, Chidambaram, 1978.
- 10) Varadarajan, M.U. *Mozhi Varalaru*, Kashaga Veliyedu, Chennai, 1975.

### **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**

Psychological factors affecting Language Learning – Attitude-Motives – Desires – Intelligence-Emotions – Readiness – Reward and Punishments.

Sociological factors affecting Language learning – Home environment – School environment – Utility of the language.

##### **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 – Command – Request – Invitation – Instruction – Permission.

#### **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, Madras, 1994.
- 2) Billows, F. L., *Techniques of Language Teaching*, Longmans, 1964.
- 3) Connor, J.D.O., *Better English Pronunciation*, UBS, New Delhi, 1997.

- 4) Cornfield, R.R., *Foreign Language Instruction – Dimensions and Horizons*, Meredith Publishing Company, New York, 1996.
- 5) Doff Adrian, *Teach English – A Training Course for Teachers*, Cambridge, 1995.
- 6) Elizabeth, MES and D.B. Rao, *Methods of Teaching English*, Discovery Publishing House, New Delhi, 2004.
- 7) Hornby, A.S., *Guide to Patterns and Usage in English*, OUP, 1993.
- 8) Indra, C.T., *Teaching Poetry at the Advanced Level*, T.R.P. Publications, Madras, 1995.
- 9) Krishnaswamy, N., *Modern English Grammar*, T.R. Publication, Chennai, 2000.
- 10) Krishnaswamy, N., *Modern English Grammar Composition*, T.R. Publication, Macmillan, 1975.
- 11) Krishnaswamy, N. and Srinivasan, T., *English Teaching at the Advanced Level*, T.R. Publications, Madras 1994.
- 12) Lee, W.R., *Language Teaching Games and Contests*, O.U.P., Oxford, 1987.
- 13) Mowla Shaikh, *Methods of Teaching English*, Neelkamal Publications Private Ltd., New Delhi, 2004.
- 14) Mowla Sheikh, *Techniques of Teaching English*, Neelkamal Publication Private Ltd., New Delhi, 2004.
- 15) Richard, J.C., and Rodgers, T.S., *Approaches and Methods in Language Teaching*, Cambridge University Press, 2002.
- 16) Rybun, W.M., *The Teaching in English*, O.U.P., London, 1966.
- 17) Sampath, K. and et.al. *Introduction to Educational Technology*, Sterling Publishers Private Ltd., New Delhi, 2003.
- 18) Sweet Henry, *The Practical Study of Languages – A Guide for Teachers and Learners*.
- 19) Swan Michael, *Practical English Usage*, O.U.P., Oxford, 2002.
- 20) Thompson, A.J. and A.V. And Martinet, *A Practical English Grammar*, O.U.P., Oxford, 1982.
- 21) Titus, P. *Remedial English*, NCBH, Madras, 1995.
- 22) Titus, P., *Progressive English Usage*, NCBH, Madras, 1994.

### **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**

Teaching for creativity: Style literary forms – ideas and thoughts – coining of scientific and technical words in Tamil principles – brevity – accuracy – simplicity and precision – language principles – literary criticism – general principles.

**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**

Language and computers – Computers in Tamil language learning – interactive methods of learning language-multimedia presentation for language materials – computers in publication. Internet and its applications – Meaning – Working of internet – e-learning – world wide web – Tele conferencing – satellite-EDUSAT.

**Practical Work**

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

**Reference Books**

- 1) Hayers, A.S., *Language Laboratory Facilities*, Oxford University Press, London, 1968.
- 2) Mary Elizabeth Flower, *Teaching Languages, Compositin and Literature*, McGraw Hill Book Company, 1965.
- 3) Thimnn, T.C., *Teaching Language*, George, G. Harrap 7 Co. Ltd., London, 1995.
- 4) Lewis, M., *Language in School*, University of London Press, Ltd., 1942.
- 5) Bloomfield, *An Introduction to the Study of Language*, George Allen & Unwin Ltd., London, 1962.
- 6) Subbu Reddiar, *Tamil Payetrum Murai*, Shanmugam Pess & manivasaagar noolagam, Chidambaram, 1957.
- 7) Billows, F.L., *Techniques of Language Teaching*, Longman Geens and Co. Ltd, 1961.
- 8) Dr. M.S. Thirumalai & Dr. Karunakaran, *Linguistics Manivasagar Noolagam*, Chidamabram, 1978.
- 9) Dr. M.S. Thirumalai, *Tamil Karpithal or Mozhi Karpithal*, Manivasagar Noolagam, Chidambaram, 1978.
- 10) Varadarajan, M.V., *Mozhi Varalaru*, Kazhaga Veliyedu, Chennai, 1975.



**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**

Problem – solving methods – characteristics of a good problem in mathematics – Inductive and Deductive methods – analytic and Synthetic methods – Limitations of each method – contributions of Dewy and Gagne

**Unit–VI**

Individualized instructions – Programmed learning – Linear Branching, and CAI – supervised study – Tutorials.

Internet and its applications – Meaning – Working of Internet – e learning – World Wide Web – Teleconferencing – Satellite-EDUSAT

**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.

Formative and summative Evaluation – Norm – Reference Booksd criterion – Reference Booksd tests in Mathematics.

**Unit-X**

Diagnosis of student's difficulties in learning Mathematics and providing suitable remedial measures – identification of students' difficulties in learning mathematics. Planning for remedial in mathematics – prognostic testing – importance. Use of power and speed tests in Mathematics.

**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.
- 2) Baur Georgy, P., George, Linda Olsen, *Helping Children Learning George, Linda Olsen Mathematics*, Cunnings Publishing Company, Inc.
- 3) Bell, E.T., *Mathematics*, Queen and Servant of Science, McGraw Hill, New York.
- 4) Bhimsankaran, C.V., *Mathematics*, Education, Book Field Centre, Mumbai.
- 5) Colpand, Richard, *Mathematics of the Elementary Teacher*, Sounders and Co., London.
- 6) Courant and Robins, *What is Mathematics*, O.U.P., Cambridge
- 7) Framount and Herbert, *How to Teach Mathematics in Secondary Schools*, Saunders and Co., London.
- 8) Gundy, Martin, H. and A.P. Hollet, *Mathematical Models*, Oxford, London.
- 9) Hogban Lacelot, *Mathematics for the Million George*, Allen and Union Ltd., London.
- 10) Majoram, D.T.F., *Teaching Mathematics*, Herineuram Educational Books, London.
- 11) Polye, G.E., *How to Solve It*, Princed University Press, London.
- 12) Scopes, P.G., *Mathematics in Secondary Schools*, Cambridge University Press, London.
- 13) Sidhu and Kulbra Singh, *The teaching of Mathematics*, Steling Publishers, New Delhi.
- 14) Smity S.E., *History of Mathematics*, Vol. I and II. Ginn and Co. S.M.H. Series London.

**COURSE–VI(C)****170. 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**

Instructional methods Lecture-project Assignment – Laboratory method – Discussion method. Lecture-cum – Demonstration method.

**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 test – Normal probability

**Unit-VIII**

Pedagogical analysis of Higher Secondary physics syllabus – Set induction – Presentation – Evaluation – Review – Assignment.

**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**

- 1) Boulind, H.E., The teaching of Physics in Tropical Secondary School, Oxford University Press, London.
- 2) Hass, K.B. and H.K. Andraker, *Preparation and Use of Visual Aids*, New York.
- 3) Saunder, H.N., The Teaching of General Science in Tropical Secondary, School UNESCO, Services London.
- 4) VAidya, N., *The Impact of Science Teaching*, Oxford and IBH Pune, New Delhi.

**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**

Science curriculum at the Higher Secondary Level – Principles of selection – Different type of organization of subject matter-Curriculum Improvement projects – aroad PSSC, CHEM. Study and chemical bond approach.

### **Unit-IV**

Instructional methods – Lecture-Project assignment – Laboratory method – Discussion method – Lecture-cum – demonstration method.

### **Unit-V**

Teaching skills – Micro teaching – Concept Features – Programme.

### **Unit-VI**

Achievement test – construction – Blueprint – Objective based test/ items – Forms of questions – Item analysis – Design and blue Print for test – Normal Probability theory – Diagnostic tests.

### **Unit-VII**

Pedagogical analysis of Higher secondary chemistry Syllabus – Set induction – Presentation – Evaluation – Review – Assignment.

### **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**

Instructional devices – Hardware and Software approaches.

Science teacher, characteristics – qualification – Professional development – In service programmes.

### **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**

- 1) Boulind, H.E., *The teaching of Chemistry in Tropical Secondary School*, Oxford University Press, London.
- 2) Carin, A. and R.B. Sund, *Discovery Teaching in Science*, Charies E. Menil Books, Columbus.
- 3) Dale, E.D., *Audio Visual Methods of Teaching*, Dryden Press, New York.
- 4) Hass, K.B. and H.K. Packer, *Preparation and Use of Visual Aids*, Macmillan, New York.
- 5) Hess Obowrn and Hoffman, *Modern Science Teaching*, Dhanpat Raji & Sons, New Delhi.
- 6) Sharma R.C., *Modern Science Teaching*, Dhanpat Raji & Sons, New Delhi.
- 7) Saunders, H.N., *The Teaching of General Science in Tropical Secondary Schools*, UNESCO Series, Oxford Uni. Press, London.
- 8) Vaidaya, N., *The Impact of Science*, Oxford IBH Pub., New Delhi.

**COURSE–VI(C)****172. CONTENT AND METHODOLOGY OF TEACHING ZOOLOGY (HSL)****Objectives**

The students teacher

- acquires a thorough knowledge of topics in Zoology taught in H.Sc., Schools and the latest development.
- Understands the
  - i. importance of zoology in the modern age and as such the Need for teaching of zoology in Schools.
  - ii. objectives of teaching Zoology at various levels and especially in the Higher Secondary Schools.
  - iii. various steps of teaching zoology and aids to teaching
  - iv. different steps involved in the scientific methods and organisation of content in zoology
  - v. teaching techniques to stimulate pupil's interest in zoology
  - vi. modern trends in the instructional methodology in the organization of content in zoology.
  - vii. principles for developing zoology syllabus
- develops skills in
  - i. planning unit lessons and test in zoology
  - ii. 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.

BSCS and Nuffield Secondary Science Project – NCERT Curriculum.

**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**

Evaluation in Zoology – Achievement test construction – Characteristics – types – objective based testing. Scientific Attitude-Aptitude tests – Interest inventory.

#### **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**

Biology in the modern world – Biochemistry – Biophysics – Development Biology – Behaviour and Neuro Physiology – Population genetics and Evolution – Genetic Engineering – Ecology and Conservation – New medicine and Teaching of Biology – Environmental Education.

#### **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.
- 2) Das, R.C., *Science Teaching in Schools*, Sterling Publishers Pvt. Ltd., Bangalore.
- 3) Ganong, W.E., *The teaching Bontanist*.
- 4) Green, T.L., *Teaching of Bilogy in Tropical Secondary School*, Vol. X of the UNESCO Hand Book Oxford University Press, London.
- 5) Gratman & Suksin, *Gene Action* (Eastern Economic Edition)
- 6) Heiss, et.al. *Modern Science Teaching*.
- 7) Hoff Arthur, G., *Science Teaching*.
- 8) Miller & Blaydes, *Methods and Materials for Teaching Biological Science methods in Bilogy*.
- 9) Morhai, et.al. *A Source Book for the Biological Science*.
- 10) Munzer and Brand, *Teaching Science through Conversation*.
- 11) Nair, C.P.S., *Teaching of Science in our School*, Chand & Co. Pvt. Ltd. New Delhi.
- 12) Narendra Vaidy, *Science Teaching for the 21<sup>st</sup> Century*, Deep and Deep Publication Pvt Ltd, New Delhi.
- 13) Ratho, T.N., *Emerging Trens in Teaching of Biology*, Kanishka Publishers, New Delhi, 1996.

- 14) Saunders, H.N., The teaching of General Science in Tropical Secondary Schools, Oxford University, London.
- 15) Sharma, R.C., *Modern Science Teaching*, Dhapat Rai Publishing Company Private Limited, New Delhi.
- 16) Uttamkumar Singh, Teaching of Science.
- 17) Yadav, M.S., *Modern methods of Science Teaching in Secondary Schools*, Anmol Publications Pvt Ltd, New Delhi.

### **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 sprit 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**

Dimensions of History – Continuity Development – Time and Place-Geographical Foundations of History – Chronological divisions of History.

###### **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.

Internet and its applications – Meaning – Working of Internet – e learning – World Wide Web – Teleconferencing – Satellite – EDUSAT.

**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 wear to remote-the Psychological development of the child with the demands of the subject.

A Critical study of Higher Secondary School History syllabus.

Organization of materials – Plans – The Chronological and periodical – The concentric and spiral – The unit and the topical – The regressive plan.

**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**

- 1) Bining, A.C. & D.H. Bining, *Teaching the Social Studies in Secondary Schools*, McGraw Hill, New York.
- 2) Burston, W.H., *Principles of History Teaching 1963*, Methuen & Col Ltd. London.
- 3) Chaudhary, L.P., *The effective teaching of History in India*, NCERT, 1975, New Delhi.
- 4) Chaudhary, *Audio Visual Aids in Teaching of Indian History*, Atmaram & Sons, 1954.
- 5) Pindlay, I.J., *History and Its Place in Education*, University of London, Press, 1923.
- 6) Pindlay, I.J., *Teaching of History*, Oxford University Press, Mumbai, 1961.

- 7) Ghose, K.D., *Creative Teaching of History*, Oxford University press, Mumbai, 1961.
- 8) Hepplod, F.C., *The Study of History in Schools as a Training in the Art of Thought*. London Historical Association Leaflet, No. 69, Christopher, 1927.
- 9) Sluck, E.L., *The Teaching of History*, Cambridge University Press, London.
- 10) Henry Johnson, *Teaching of History in Elementary and Secondary School*, MacMillan, New York.
- 11) Hill, C.P., *Suggestions on the Teaching of History*, UNESCO, 1953.
- 12) Incorporated Association of Assistant Masters, *The Teaching of History*, Oxford University Press, 1950, London.
- 13) Klapper, C.P., *The Teaching of History*, Oxford University Press, 1917, London.
- 14) Kochar, S.K., *Teaching of History*, Sterling Publishers, New Delhi.
- 15) Keeting, M.W., *Studies in the Teaching of History* Black, 1910, London.
- 16) Klapper, P., *The Teaching of History*, D. Appleton Century Company, London & New York.
- 17) N.C.E.R.T., *Teaching History in Secondary Schools* NCERT, New Delhi.
- 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.

##### **COURES CONTENT**

###### **Unit-I**

Meaning, scope and definitions of Economics – Economics in Education – Fields of Economics – Agriculture, Industry, marketing Banking and public Finance, Correlation of Economics with – Geography, Civics, history, Politics, mathematics and Statistics.

###### **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**

Economics – Trends in Curriculum Development of Tamilnadu Higher Secondary Stage-Importance of planning of Teaching.

**Unit-V**

Planning and Methods of Teaching of Economics.

Lecturer method – Descriptive method – Objective based method – Problem – solving methods – Project method – Inductive and Deductive method – Case method.

**Unit-VI**

New Development of Methods of Teaching Economics.

Micro – Teaching – Workshop – Independent – study Assignments – Individualized Instruction – Teaching small Groups – Team – Teaching – Symposium – Seminar and Panel Discussion.

**Unit-VII**

Education Technology – in Economics – Programmed instruction – Types – Advantages – Disadvantages; CAI in Economics – Use of TV Radio and Films.

Internet and its applications – Meaning – Working of Internet – e learning – World Wide Web – Teleconferencing – Satellite-EDUSAT.

**Unit-VIII**

Use of Graphic Materials – Picture-Character – Type –ables Diagram – Graphs, Posters, Display Board, industrial sources – Text Book – Periodicals – Journals – Reference Books Materials – Community Resources – Technical Documents – Surveys – Current Affairs.

**Unit-IX: Evaluation in Economics**

Objective based evaluation – Different types of Tests – Diagnostic and Remedial methods – Examination Reform – internal and External Exam – Theory and Practical areas in Evaluation.

**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**

- 1) Tonne, Popham and Freeman, *Methods of Teaching Business Subjects*, McGraw Hill, 1965.
- 2) Kochar, S.K., *The Teaching of Social Studies*, Sterling Publishers Pvt. Ltd., New Delhi, 1963.

- 3) Ebel and L. Robert, *Measuring Educational Achievement*, Prentice Hall International, Inc, USA, 1965.
- 4) Binning, A.C. and D.A. Binning, *Teaching the Social Studies in Secondary Schools*, McGraw Hill, New York.
- 5) Keith Lumsden, *New Developments in the Teaching of Economics*, Prentice Hall the Englewood, New jersey, 1967.

### **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**

Introduction of Commerce Education – historical – present status – teaching of Book keeping and Accountancy – integration of commerce with other school subjects – Consumer Education – Electronic Accounting, VAT (Value Added Tax) calculation.

###### **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**

Curriculum – principles involved in the curriculum construction XI and XII Commerce and Accountancy syllabi – Academic and vocational curriculum – vocational areas identified in the Tamil Nadu Higher Secondary Stage under the heading “business and Commerce” – selection of materials – gradation of materials for School and College level. Comparison of CBSE and State Board Commerce and Accountancy Syllabi.

###### **Unit-IV**

Lecturer method – Descriptive method – Objective based method – Demonstration method – Problem method – Project method – Inductive method – Deductive method – Case study – Student motivated techniques – Surveys and Market studies.

**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.

Internet and its applications – Meaning – Working of Internet – e learning – World Wide Web – Teleconferencing – Satellite – EDUSAT.

**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**

Instructional material – text book – periodicals – journals – Reference Books materials, technical documents – surveys.

**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**

- 1) Kochhar, S.K. *Methods and Techniques of Teaching*, Sterling Publishers Pvt. Ltd., New Delhi, 1992.

- 2) Passi, B.K., *Becoming Better Teacher & Micro Teaching Approaches*, Sahityamudra Solays, Ahanadabad, 1976.
- 3) Sampath, et.al., *Introduction to Education Technology*, Sterling Publishers, New Delhi, 1990.
- 4) Flanders A. Ned, *Analyzing Teaching Behaviour*, Addison – Wesley Publishing Company, USA, 1979.
- 5) Musseeman, Vernon A. and et al., *Method of Teaching Accountancy*, McGraw Hill Inc. USA, 1979.
- 6) Sharma, R. A., *Technology of Teaching*, International Publishing House, Meerut, India, 1988.
- 7) Ornistein, Allen C., and et al. *Curriculum Foundation, Principles and Issues*, Prentice Hall, Englewood Cliffs's, New Jersey, USA, 1988.
- 8) Dececee 'John, P. and et al., *The Psychology of Learning and Instruction*, Prentice Hall of India, New Delhi.
- 9) Association of Indian Universities, *New Technology in Higher Education*, C Edited by Shah Sy., New Delhi, 1986.
- 10) Jangira and et al. *Core Learning Skills*, The Micro Teaching Approach NCERT, New Delhi, 1982.
- 11) Khan, M.S., *Commerce Education*, Sterling Publication Ltd. 1992.
- 12) Pia Nazareth, M., *Education – Goals, Aims and Objectives*, Vikas Publishing House Pvt., Ltd., 1984.
- 13) Tonne, Pophan and Freeman, *Methods of Teaching Business Subjects*, McGraw Hill, 1965.
- 14) Kochar, S.K., *The Teaching of Social Studies*, Sterling Publishers Pvt. ltd., New Delhi, 1963.
- 15) Leonard H. Clerk and Living S. Starr, *Secondary School Teaching Methods*. MacMillan Publishing Co., Inc., New York, 1976.
- 16) Tarachand, *Principles of Teaching*, Anmol Publications, New Delhi, 1990.
- 17) Leu, M. Carey, *Measuring and Evaluating School Learning*, Allyn and Bacon Inc. USA, 1988.

### **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**

Micro – Teaching – Concept – Procedure and planning. Teaching skills – Set Induction – Motivation – Introducing the lesson – use of lack board – questioning – probing – questions – Stimulus Variation – Reinforcement – using examples and closure.

### **Unit-IV**

Principles of curriculum development – Selection of content and organization of subject matter – BSCS and Nuffield Secondary Science Project – NCERT curriculum.

### **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**

Biology in the modern world – Bio-Chemistry – Bio-physics – Developmental Biology – Behaviour and neuro physiology, population genetics and evolution genetic engineering – Ecology and conservation – New medium and teaching of Biology – Environmental Education.

### **Practical Work**

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

**Reference Books**

- 1) Ganong, W.E., The Teaching of Botany.
- 2) Green, T.H., The teaching of Biology in Tropical Secondary School, Vol. X of the UNESCO Hand Books.
- 3) Gratman & Sukkin, Gene Action (Eastern Economic Edition)
- 4) Heiss, et al. Modern Science Teaching.
- 5) Hoff Arthur, G., Science of Teaching.
- 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*.
- 9) Narendern Vaidya, Science Teaching for the 21<sup>st</sup> Century.
- 10) Ratho, T.N., Emerging Trends in Teaching of Botany.
- 11) Ratho, T.N., Emerging Trends in Teaching of Botany.
- 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.
- 15) N.C.R.T., Text Books in Biology for Higher Secondary Schools.
- 16) Sharma, R.C., *Modern Science Teaching*, Dhampet Rai Sods, Delhi.
- 17) Vaidya, N., *The impact of Science*, Oxford & I.B.H., Pune, 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 Graphics: use of computer graphics and sound in teaching of Computer Science. LOGO – Use of LOGO in the schools – classroom – organization – teacher's role-the future with LOGO.

Computer Technology: The growing capability of Computer Technology – use of Robots artificial intelligence-office automation.

### **Unit-VI**

Internet and applications – meaning – working of internet – e-learning – World Wide Web – teleconferencing – satellite – EDUSAT.

### **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.
- ii. Designing a CAI lesson: specification of objectives – front end analysis – outcome specification of lesson design – lesson development – lesson validation.
- iii. Common CAI frames; introduction and instructions – menu page-teaching frames – criterion (test) frames – feedback (remedial) frames – reinforcement frames – graphics frames.

### **Unit-IX**

Audio – Visual Education

- i. Need and importance of Audio – Visual Aids in teaching Computer Science and their classification.

- ii. Use of graphic materials: picture charts – diagrams – graphic and tables – projective aids.
- 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

- 1) Rao, P.V.S., *Computer Programming*, TMH, Delhi.
- 2) Roger Humt Hon Shelley, *Computers and Common Sense*, Prentic Hall (India) Delhi.
- 3) Shied, *Introduction to Computer Science*, SCHAVM.
- 4) Stanely Pogrow, *Education in the Compute Age*, Sage Publication, Delhi, 1993.
- 5) Steeven M. Rass, *Basic Programmking for Education*, Pentic Hall, New York, 1990.

## 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**

Curriculum development – Gradation – Divisions of school Course-Primary Secondary and higher Secondary – Theories influencing the select in of materials – Doctrines of natural tastes – proceeding from know to unknown – the ideal approach to reconciliation of the psychological development of the child with the demands of the subject. Organization of material – Plans – The unit and the topical – Country by country and the comparative study – The Concentric and the spiral.

**Unit-VI**

Curriculum development – Correlation with other subjects – History – Geography – Economics – Sociology – Literature and Psychology – A Critical study of the Higher Secondary School syllabus.

**Unit-VII**

Methods of teaching Political Science-Traditional Methods – Text book and lecture methods – Oral lesson – the induction and Socialized relation.

**Unit-VIII**

Seminar – essay and Composition exercise-Problem and Project methods – Team teaching – Symposium – Workshop – supervised study – Field trips – Dramatization and role playing method – Guest speaker from relevant sphere of activity – Programmed Instruction – Concept – type advantages and disadvantages – Modules – Computer assisted instruction.

**Unit-IX**

Technological media in political science: Hardware approach – Projector – Tape recorder – Computer – Video cassette recorder – Radio – Television – Closed Circuit T.V – Overhead Projector.

Software approach: Maps – Pictures – Model and specimens – Charts – Diagram – Museum – Bulletin board – Tag board.

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

### **Unit–X : Evaluation**

Purpose and techniques – Traditional Vs. Modern approaches – Strength and weakness – Construction of an objective based test paper – Test items – Question bank.

### **Practical Work**

Preparation of graphic aids – Construction of a unit test in Political Science-Critical study of Political Science question paper of Higher Secondary for University Examination – Participation in mock Parliament and U.N. session – Field trips to study the legislature party convention civic bodies, and other government institutions at work – A picture album – marinating of scrap book.

### **Reference Books**

- 1) American Political Science, *Goals for Political Science*, William Alone Association Inc. Publishers, New York.
- 2) Bining, A.C. & D.H. Bining, *Teaching of the Social Studies in Secondary School*, McGraw Hill, New York.
- 3) Earle, U. Rugg & N.H. Dearborn, *The Social Studies Teachers Normal Schools*, Greeley Colo, Colarado, State Teachers Colleges.
- 4) Heater, D. B.ed., *The Teaching of Politics*, Educational Methods.
- 5) Simpson, R.H., *Improving Teacher Learning Process*, Longman, New York, 1953.
- 6) Welsey, E.B., *Teaching Social Studeies in High Schools*, D.C Health & Co., 1935, Baston.
- 7) Wilson, H.E., *The Social Studies Curriculum in the School*, Fourth Year Book, Washington D.C.

## **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**

Aims, Objectives – Meaning – Differences – General and Specific aims in the various stages – Instructional objectives – Objectives based teaching – Lesson planning – Need and importance-Principles – Preparation of Lesson Plan – Values – Information – Educational – Ethical – Cultural – Disciplinary.

### **Unit-IV**

Correlation – The incidental – Systematic correlation – The relationship – Political Science-Literature-Economics – Sciences.

### **Unit-V**

Methods of Teaching – Traditional – Text – book – Lecture-Dramatisation – Story telling – Inductive-Drill and Review – Modern Methods – Problem Solving Project method – Laboratory Supervised study – Source method – Dalton Plan. Innovative approaches – Seminar – Symposium – Discussion – Panel discussion – Workshop – Team Teaching.

### **Unit-VI**

Teaching Skills – Micro teaching – Importance-Micro cycle-Skill development. Curriculum – The need for choice of materials – Detailed study of the Secondary School Social syllabus – Curriculum content graded Social Science-the claims of History – Geography – Civics – A Critical study of the Secondary School Social Science syllabus.

### **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)

Internet and its applications – Meaning – Working of Internet – e learning – World Wide Web – Teleconferencing – Satellite-EDUSAT

### **Unit-IX**

Use of media – Audio – Visual aids – Multi media approach – Map – Need and importance kinds of map – Developing skill in map reading – Map drawing – map spelling – Function.

**Unit–X**

Equipment, Resources and Evaluation – Text book – Collateral reading – Utilisation of community resources – The Social Science teacher – Field trip and educational tour – The Current events – Library and Reference Books – Evaluation and testing – Achievement Test – Characteristics of a good test – Construction of a Achievement Test – Interpretation of Test Scores.

**Practical Work**

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

**Reference Books**

- 1) Beales, A.C.F.A., Guide to the Teaching of History in Schools.
- 2) Binning and Binning, Teaching of Social Studies in Secondary Schools.
- 3) Brauit, E.W.II and D. Shave, *Geography in and out of School*.
- 4) Brick, G.D.J., An Experiment in Teaching of Geography.
- 5) Chaterjee, *National Atlas of India*, Dehra Dun Survey of Indian Atlas.
- 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.
- 10) Hasluch, E.L., The Teaching of History.
- 11) Hill, C.P., Suggestions for the teaching history UNESCO.
- 12) Aggarwal, J.C., *Teaching of Political Science*, Vikas Publishing House Pvt. Ltd., 5, Ansari Road, New Delhi.
- 13) Kochar, S.K., Teaching of Social Science.
- 14) NCERT, *Practical Geography – A Text Book for Secondary Schools*.
- 15) Pickles, Elementary Map Reading.
- 16) Sharama, S.D., T.P Lamba, C.R Saxeno and V. Murthy, *Teaching of Civics*, Nai Sarak, Delhi, 1988.
- 17) Saiyidin, K.G., *Education for International Understanding*, Hind Kitbs, Bombay, 1948.
- 18) Subha Prakash, The Modern Approach to History.
- 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 class room 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**

Mathematics curriculum at Secondary level. Meaning – content, selection and organization. Evaluation and revision of the curriculum, text book – characteristics – appropriate use of it.

### **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**

Problem – solving methods – characteristics of a good problem in mathematics – inductive and deductive method – analysis and synthetic method.

### **Unit-VII**

Individualized instruction – programmed learning – linear and branching, CAI, supervised study – assignments. Review and characteristics.

Internet and its applications – Meaning – Working of Internet – e learning – World Wide Web – Teleconferencing – Satellite-EDUSAT

### **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**

Construction of achievement tests – objective type and objective based items. Item construction. Test design and blue print – scoring characteristics – preparation and administration procedures. Diagnosis – remedial teaching.

**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*.
- 3) Baur, George, R.R. Geeorge, *Linda Olsen Helping Children Learning Mathematics*, Cunnings Publishing Company, Inc.
- 4) Bell, E.T., *Mathematics*, Queen and Servant of Sciences, McGraw Hill, New York.
- 5) Bhimasankara, C.V., *Mathematics Eduxcation*, Book Field Centre, Bombay.
- 6) Colpand, Richard, *Mathematics of the Elementary Teachers*, Saunders and Co., London.
- 7) Conne, Davies, Hendeuar, *Dynamics of Teaching Secondary School Mathematics*, H.M. Company, Boston.
- 8) Courant and Robins, *What is Mathematics*, O.U.P. Cambridge
- 9) Fletcher, T.G., *Some Lessons in Mathematics*, O.U.P. Cambridge
- 10) Gundy, Martin, H. and A.P. Hollet, *Mathematical Models*, Oxford, London.
- 11) Framount, Herbert, *How to Teach Mathematics in Secondary School*, Saunders and co., London.
- 12) Hogbsn Lancelot, *Mathematics for the Million*, George Allen and Union Ltd., London.
- 13) Kapur, J.N., *Nature of Mathematics*, Arya Book Depot, New Delhil.
- 14) Majoram, D.T.F., *Teaching Mathematics*, Herineuram Educational Books, London.
- 15) Polye, G.E., *How to Solve It*, Princed University Press, London.
- 16) Scopes, P.G., *Mathematics in Secondary Schools*, Cambridge University Press, London.
- 17) Sidhu, Kulbra, *The Teching of Mathematics*, Sterling Publishers, New Delhi.
- 18) Smity, S.E., *History of Mathematics*, Vol.I and II gin and Co.,
- 19) NCERT, S.M.P Series Booklets Related to Mathematics Education, London.

**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 from time to time respectively.

### **Unit-II**

- a) Nature and scope of physical science in Secondary Schools.
- 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**

- a) Methods of teaching science-Lecture, Lecture-Demonstration – Laboratory, Assignment, Heuristic, Historical, Biographical, Project method, and Scientific method of teaching and their suitability and limitations.
- b) Objective based instruction
- c) Programmed instruction – Concept, Types, advantages and disadvantages.
- d) CAI – Concept Advantages and limitation.
- e) Computer Assisted Instruction (CAI) – Concept – Advantages – Disadvantages – Internet and its applications – Meaning – Working of Internet – e-learning – World Wide Web – Teleconferencing – Satellite-EDUSAT.

### **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**

- 1) Boulind, H.E., *The Teaching of Physics in Tropical Secondary School*, Oxford University, London.
- 2) Carin, A. and R.B. Sund, *Discovery Teaching in Science*, Charles E. Merrill Book, Columbus.
- 3) Dale E.D., *Audio Visual Methods Teaching*, Dryden Press, New York.
- 4) Hass, K.B. and H.K. Packer, *Preparation and Use of Visual Aids*, Prentice Hall Ltd., New York.
- 5) Hess Obowrn and Hoffman, *Modernk science Teaching*, MacMillan, New York.
- 6) Hoff Arthur, G., *Secondary School Science Teaching*, Philadelphia, The Blockiston Co.
- 7) Nair C.P.S., *Teaching of Science in Our School*, Chand & Co. P. Ltd., New Delhi.
- 8) Newbur, N.F., *Teaching of Chemistry in Tropical Secondary Schools*, Oxford Universtiy Press, London.
- 9) Sharma, R.C., *Modern Science Teaching*, Dhanpet Rai & Sons, Delhi.
- 10) Saunders, H.N., *The teaching of General Science in tropical Secondary Schools*, UNESCO Saries, Oxford Uni Press, London.
- 11) Thurber Walter Bs Collectee Alfred, *Teaching Science in Today's Secondary School*, Bostan Allch and Bacco.
- 12) Vaiday, N., *The Impact of Science*, Oxford, IBH Pub., New Delhi.
- 13) Wango, *World Views on Science Education*, Oxford University IBH Pub., Bombay.
- 14) *New Trends in Chemistry, Teaching*, Vol. V. UNESCO pub.

**COURSE–VI(B)****166. CONTENT AND METHODOLOGY OF TEACHING NATURAL SCIENCE (SL)****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 class room 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**

Nature of modern sciences – Thrust area in sciences – Impact of Biology on modern communities – Globalization and science.

**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.

BSCS and Nuffield Secondary Science Projects – NCERT curriculum.

**Unit–VI : Methods of Teaching**

Lecture method – Demonstration method – Project method – Heuristic method – Biographical and Assignment methods.

Programmed instruction – concept – type-advantages – Computer assisted instruction – team teaching – teaching modules – Internet and its applications – Meaning – Working of Internet – e learning – World Wide Web – Teleconferencing – Satellite-EDUSAT.

Correlation of biology with other subjects.

**Unit-VII : A.V. Aids Biology Teaching**

Need and importance of A.V. Aids, their classification and uses.

School Garden – Nature calendar museum – Aquarium – Terrarium – Science clubs – Field trips.

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**

Biology in the modern world – Bio-Chemistry – Bio-Physics – Developmental biology – Behavior and neurophysiology – Population genetics – Evaluation – Genetic engineering – Ecology and conservation – New medicine-Teaching of Biology – Environment education.

**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*.
- 3) Gangon, W.E., *The Teaching Bothist*.
- 4) Green, T.H., *The teaching of Biology in Tropical Secondary School X of the UNESCO Hand Book*.
- 5) Gratman & Suskin, *Gene Action* (Eastern Econom-edition)
- 6) Meiss, et.al., *Modern Science Teaching*.
- 7) Hoff, *Science Teaching*.
- 8) Miller & Blaydes, *Methods and Materials for Testing Biological Science Methods in Biology*.
- 9) Kinsey, *Methods in Biology*.
- 10) Morhait, et.al., *A Source Book for the Biological Science*.
- 11) NCERT, *Text Books in Biology for Higher Secondary Schools*.
- 12) Nair, C.P.S. *Teaching of Science in our schools*. New Delhi: Chand and Co. Pvt. Ltd.
- 13) Narendra Vaidy. *Science Teaching for 21<sup>st</sup> Century*. New Delhi: Deep and Deep Publications Pvt. Ltd.
- 14) Ratho, T.N. 1996. *Emerging Trends in Teaching of Biology*. New Delhi: Kanishka Publishers.
- 15) Sounders, H.N., 1967. *The Teaching of General Science in Tropical Secondary Schools*. London: Oxford University Press.

- 16) Jangira, N.K. and Ajit Singh, 1982. Core Teaching Skills. The Micro Teaching Approach. New Delhi: National Council for Educational Research and Training.
- 17) Sharma, R.C. 2003. Modern Science Teaching. New Delhi: Dhanpat Rai Publishing Company Pvt. Ltd.
- 18) Avtar Singh, 2004. Instructional objectives of school subjects. New Delhi: National Council for Educational Research and Training.
- 19) Das, R.C. 1985. Science Teaching in Schools. New Delhi: Sterling Publishers Pvt. Ltd.
- 20) Yadav, M.S. 2000. Modern Methods of Science Teaching in Secondary Schools. New Delhi: Anmol Publication Pvt. Ltd.
- 21) Martha E. Munzer and Paul F. Brandwein., 1960. Teaching Science Through Conservation. New York: Mc. Graw Hill Book Company.

### **COURSE–VI**

#### **181. CONTENT AND MEHODOLOGY 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**

Internet and its applications – Meaning – Working of Internet – e learning – World Wide Web – Teleconferencing – Satellite-EDUSAT.

**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).
- 5) Indira Madhular, *Impact of Globalisation on Education Learning to live Together*, Authors Press, Delhi.

**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.
- 2) Achievement test – Meaning of achievement – Planning for an achievement test – Design and blue print – preparation of test items – question – wise analysis, item analysis – scoring key.
- 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.
- 7) Measures of variability – Meaning of variability – Meaning of range-Mean deviation – quartile deviation – standard deviation – Relative merits of each measure.
- 8) Normality of distribution – skewness – Kurtosis.
- 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 (atlest; 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 atleast five general lesson (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**

Generations of Computers: Essential Components of Computers Block Diagram, CPU, INPUT & OUTPUT Devices; Characteristics of Computers; Uses and Applications of Computers: Binary Conversion from and to Decimal, Octal, and Hexadecimal systems, Viruses and Protection Systems.

**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-Excel: Statistical Application, Measures of Central Tendencies (Mean, Median, Mode) Standard Deviation – Correlation etc., Graphical Representations – Bar graphs, Pie Diagrams, Smooth curves.

MS-Access: Creating a File-Adding and Changing information – Sorting – Searching and 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 Internet through an Internet Service Provider-Account, Internet Explorer, Search Engines, Search of information using key words, Opening a website form URL, Saving information form 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 form 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**

- 1) Flynn, Meredith & Rutkosky, Nita, *Advance Microsoft Office 2000*, BPB Publications, New Delhi, 2000.
- 2) Hergest, Douglas, *Excel 4 for Windows – Instant Reference Books*, Tech Publications PTE. Ltd., Subgaoirem 1992.
- 3) Hillman, David, *Multimedia Technology and Applications*, Delmar Publishers, New York, 1998.
- 4) Minasi, Mard, Christiansen, Eric & Shapar, Kristina, *Expert Guide to Windows 98*, Sybex, San Francisco, 1998.
- 5) Nagpal, D.P., *Computer Course*, Wheel Publishing, New Delhi, 2001.
- 6) Rajaraman, V. Fimda, *Metals of Computers*, Prentice Hall of India, Pvt. Ltd., New Delhi, 1997.
- 7) Rathbone, Andy, *Windows for Dummies*, Pustak Mahal, Delhi, 1992.
- 8) Sanders, Donald II, *Computer Today*, McGraw Hill Co., New York, 1998.
- 9) Sinha, P.K., *Computer Fundamentals: Concepts, Systems and Applications*.
- 10) Umderdahl, Brian & Underdahl, Keith, *Internet with Web Page/Websit Design*, IDG Books India (P) Ltd, New Delhi, 2000.

