

**DEPARTMENT  
OF  
EDUCATION**

Karunya University

## LIST OF SUBJECTS

Code	Subject Name	Credit
ED201	Education in National and International Perspectives	4:0:0
ED202	Psychopedagogical Approach of Education	4:0:0
ED203	Educational Reforms and Technology	4:0:0
ED204	Content cum Methodology of Teaching Mathematics I	4:0:0
ED205	Content cum Methodology of Teaching Physical Science I	4:0:0
ED206	Content cum Methodology of Teaching Biology I	4:0:0
ED207	Content cum Methodology of Teaching Computer Education I	4:0:0
ED208	Content cum Methodology of Teaching English I	4:0:0
ED209	Content cum Methodology of Teaching Mathematics II	4:0:0
ED210	Content cum Methodology of Teaching Physical Science II	4:0:0
ED211	Content cum Methodology of Teaching Biology II	4:0:0
ED212	Content cum Methodology of Teaching Computer Education II	4:0:0
ED213	Curriculum Design and Evaluation	4:0:0
ED214	Teaching Competency I (Practical)	0:0:2
ED215	Teaching Competency II (Practical)	0:0:2
ED216	Construction of Tests (Record)	0:0:2
ED217	Micro Teaching (Record)	0:0:2
ED218	Psychology Practicals (Record)	0:0:2
ED219	Case Study (Record)	0:0:2
ED220	School Survey (Record)	0:0:2
ED221	Physical Education (Record)	0:0:2
ED222	Community Services (Record)	0:0:2
ED223	Camp Activities (Record)	0:0:2
ED224	Educational Guidance and Counselling	4:0:0
ED225	Educational Management	4:0:0
ED226	Educational Measurement and Evaluation	4:0:0
ED227	Environmental Education	4:0:0

### ED201 EDUCATION IN THE NATIONAL AND INTERNATIONAL PERSPECTIVES

**Credit : 4:0:0**

**Marks : 40+60**

#### **Objectives**

To enable the teacher trainee to understand:

1. The relationship between philosophical systems and education.
2. Role of education in social change.
3. Role of education in human resource development.
4. Educational policies and programmes in India.

5. Develop vision for futuristic programmes in education.
6. Develop international understanding.

### **Course content**

#### **Unit – I.**

##### **(a) Emerging Trends in Society:**

Liberalisation, Globalisation and Privatisation – Consumerism – Mass Media – Role of Technology in Social change – Emergence of the knowledge society – Adaptive demands in society – Global village concept – Vision for Indian Education in the 21<sup>st</sup> century.

##### **(b) Educational Implications of Schools of Thought:**

Idealism – Naturalism – Pragmatism – Humanism – Jainism – Buddhism – Philosophy of Rabindranath Tagore – Swami Vivekananda – Mahatma Gandhi – Sri Aurobindo Ghosh – J. Krishnamurthi.

#### **Unit – II.**

##### **(a) Education at different levels:**

Levels of Education – Pre – Primary, Secondary and Higher secondary education – Statutory Boards of Education – CBSE, ICSE, Anglo – Indian, Matriculation and State Boards – Higher Education Sceneries – Universities – Autonomous bodies – Deemed University.

##### **(b) Emerging concerns in Education:**

Education as an instrument of social change – gender justice – population education – ecological imbalance - Human rights – Quality education – value oriented education – Education for sustainable development.

#### **Unit – III: Culture and Human values.**

Definition of education – concept of formal, informal and non-formal education – agencies involved in Open University system – Distance Education – Correspondence course – Concept of deschooling – hidden curriculum – rural and tribal education – education for world peace. Competency based training – teachers and disabled (children) pupils – special education enriched curriculum for gifted.

#### **Unit – IV. Status of Education in the Indian Constitution:**

Universalisation of Education – Equality of opportunities – Education and Fundamental rights and duties – Education for National Integration – Education for International Understanding – Critical concerns of higher education – Quality verses quantity in education – student unrest examination reports – Adult education – women's education – Three language formula – Moral instruction – Gender equity.

#### **Unit – V: Information Technology.**

Role of satellites in education – Educational Technology – use of Internet and Teleconferencing – Quality control – Schools of Excellence – Accountability in higher education – Extension as a third dimension of higher studies- Entrance test as a necessary evil – vocational guidance.

#### **Bibliography:**

1. Taneja V.R – ( 1973) Education Thought and Practice, sterling publications, New Dehli.

2. Saider. K. G. – Problems of Educational reconstruction in India, Asia publishing House, Bombay.
3. Shrinath. K.L - Education in Changing India, Asia publishing House, Madras.
4. Tyogi. P.N. (1991) – Education for All – A Graphic Presentation New Delhi, NIEPA.
5. Ruhela S.P. (1969) – Social Determinants of Educability in India, Jain Publishers, New Delhi.
6. Brubacher John. S (1950) Modern Philosophies of Education, Mc Grow Hill, New York.
7. Mathur DSA (1966) Sociological – approach to Indian Educaiton Vinod Pentak Mandes, Agra.
8. Gandhi M.K. (1951) Basic Education, Nanajeevan Publishing House , Ahamedabad.
9. Mukherji.Dr. S.N. – Education in India, Today and Tomorrow, Acharya Book Depot, Bawda.
10. Mohanty (1982) Indian Education in the Emerging Indian Society, Sterling Publishers, New Delhi.
11. Lakshmi. S (1989) – Challenges in Indian Education, Sterling Publishers pvt. Ltd., New Delhi.
12. Toffler. A (1976), Future Shock Bantean books, New york.
13. The Hindu speaker on education (1997), Kastrui & sons ltd.

## **ED202 PHYCHOPEDEGOGICAL APPROACH TO EDUCATION**

**Credit : 4:0:0**

**Marks : 40+60**

### **OBJECTIVIES**

At the end of the course, the pre service teacher will be able to

1. Realize the significance of psychological basis in education
2. Explore the pivots of psychological basis in education learning experience, learning environment, learning process and the teacher, in detail.
3. Acquire sufficient knowledge and understanding about the nature and scope of Psycho pedagogical approach to education.
4. Apply the principles of psycho pedagogical approach in classroom situation and education.
5. Equip relevantly to function as an efficient teacher.

### **UNIT- I: Introduction to Psycho Pedagogical Approach**

School, Methods, Branches of Psychology and Nature and Scope of Educational Psychology, Significance of Psycho pedagogical approach.

### **UNIT-II : Human Growth and Development with Cognitive Development.**

General principles of growth and development – Dimensions of Development – Phases of Development – Childhood and Adolescence- Developmental – Tasks and Education. Distinction between growth and development – Maturation and Development – Nature and nature.

Cognitive process – Attention – Factors relating to attention – Span of Attention – Distraction and inattention - Sensation and Perception – Principles of perception – Imagery –

Concepts – Types, Concept Formation – Bruner’s Theory – Concepts Maps – Piaget’s shares of Cognitive Development – Reasoning and Problem solving. Implications for the teacher.

### **UNIT III : Learning and Motivation**

Nature and importance of Learning – Types of Learning – Theories of Learning – Thorndike, Pavlov, Skinner, Kohler and Gagne – Learning Curve – Transfer of Learning, Facilitating Transfer – Remembering and Forgetting – Curve of Forgetting – Individual Differences in Learning.

Motivation and Learning – Functions of Motives – Kinds of Motives – Hull’s Drive Reduction, Maslow’s Hierarchy of Needs, Achievement Motivation – Motivation in the classroom context – praise and blame, rewards and punishments – Feedback/Knowledge of Results – Level of Aspiration.

### **UNIT –IV : Personality, Intelligence and Creativity**

Meaning and Definitions of Personality – Major determinants of personality – Theories of Personality – Psychoanalytic, Humanistic, Transpersonal, Assessment of Personality – Integrated personality.

Theories of Intelligence – Single, Two Factor and Multi Factor Theories – Guilford’s Structure of the Intellect – Emotional Intelligence, Multiple Intelligence – Individual differences in distribution of Intelligence - Intelligence Tests and their uses.

Creativity – Relationship and difference between intelligence and creativity – Convergent and Divergent Thinking., Lateral Thinking – The Process of Creativity – The Gifted and their Identification – Promotion of the Gifted.

### **UNIT-V : Mental Health, Mental Hygiene & Guidance and Counselling**

Conflict and Frustration – Concept of Adjustment – Causes of Maladjustment – Symptom of Maladjustment, Defense Mechanisms - Problem Children. Juvenile Delinquency – Concepts of Mental Health and Mental Hygiene.

Definitions of Guidance and Counseling – Distinction between Guidance and Counseling, Need, Nature and Types – Educational, Vocational and personal – Identification of children with acute counseling needs – Counseling techniques – Individual and group techniques, Psychotherapy and psychoanalysis.

### **Suggested Reading**

1. Adams, J.A. (1992): Learning and Memory: An Introduction, Home wood, Illinois: Dorsey Press.
2. Adams, H.E. (1992); Psychology of Adjustments, New York : Ronald.
3. Bhatnagar, Asha and Gupta, Nirmala (1999) : Guidance and Counselling. Vol.1 & II, New Delhi: Vikas Publishing House.
4. Boaz., G.D (1968) : General Psychology; Institute of Psychological Service, Madras.
5. Broady E.B and Body, N.(1996); Intelligence; Nature, Determinants and Consequence, New York; Academic Press
6. Butcher H.J., (1993) Human Intelligence : Its Nature and Assessment, New York.

7. Butcher and Javils N (1993) Objective personality Assessment, New York: Academic Press.
8. Coleman, Daniel (1998), Working with Emotional Intelligence, New York Bantan Books.
9. Coleman Daniel (1995) Emotional Intelligence, New York Bantan Books
10. Cronback. I., J., (1990) : Essentials of Psychology, New York: Harper and Row.
11. Crow and Crow (1993) : Educational Psychology New Delhi; Eurasia Publishing House.
12. DeCeco, Jogh P and Crawford (1977); The Psychology of Learning and Instruction (2<sup>nd</sup> ed.). New Delhi: Prentice Hall of India.
13. Debono., E (1967): New Think : The Use of lateral thinking in the generation of New ideas, New; Basic Books.
14. Eysenck H.J (1997); Dimensions of Personality, London: Kegan Paul
15. Garden H. (1993) ; Multiple Intelligence : Theory into Practice, New York

### **Basic Books**

1. Hall C.S and Lindzey, G(1998) ; Theories of Personality (3<sup>rd</sup> den) New York; John wiley.
2. Hiilgard E.F., Ernest Richard C. Atkinson and Rita (1971) Introduction to Psychology (5<sup>th</sup> edn.) New York : Harcourt Brace.
3. Hurlock . E.B(1998) : Child Psychology. Tokyo: McGraw Hill.
4. Maslow A.H. (1990) Motivation and Personality (2<sup>nd</sup> edn.) New York : Harper & Row.
5. Morgan and King (1976) ; Introduction to Psychology, Delhi: Tata Megraw Hill
6. Munn N.I., (1997) Introduction to Psychology, Delhi.
7. Nagarajan K. Selvakumar. S.D.,Mani, S and Devaraj.G.(1999): fy;tp estpay ;” Chennai; Ram Publishers.
8. Parr, John and Adiseshiah, W.T/V (1997): Experimental Psychology, Madras allied Publishers.
9. Pasricha. Prem (1976): Guidance and Counselling in Indian Education, New Delhi; NCERT.
10. Petri, H.L (1995); Motivation : Theory and Research(2<sup>nd</sup> edn) Belmont Ca: Wadsworth.
11. Santhanam, S. (1993) : Human Motivation, New York: Halt, Richer & Winston.

### **PSYCHOLOGICAL EXPERIMENTS (any seven of the following)**

1. Intelligence
2. Learning
3. Transfer of Training
4. Aptitude
5. Adjustment
6. Concept Formation
7. Level of Aspiration
8. Interest
9. Personality Types
10. Attention

11. Perception
12. Motor Skills
13. Creativity
14. Achievement Motivation

## ED203 EDUCATIONAL REFORMS AND TECHNOLOGY

**Credit : 3:0:0**

**Marks : 40+60**

### **Objectives:**

At the end of the course the student teacher will have an understanding of

- 1) The meaning of reform and the impact of reform.
- 2) The role of the nation in bringing out reforms in the field of education
- 3) Contributions of individuals for educational reforms.
- 4) The outcomes of the educational reforms.
- 5) The meaning and scope of educational technology.
- 6) Recent trends in imparting education due to technological development.

### **Unit I. Educational Reforms:**

Meaning –Need for Reforms – Relations between education and social reforms-The role of the nation in bringing out educational reforms-education in concurrent list-Constitutional commitment - Mudaliar Commission - Kothari Commission-National Education Policy (1978)- NEP (1986)-Minimum levels of education- Women's education-Special education-Adult education and Vocational Education.

### **Unit II. Contributions of individuals for Educational Reforms:**

Contributions of Tagore, Mahatma Gandhi, SriAurobindo, J.Krishnamoorthy, Rousseau, Froebel, John Dewey and Montessori.

### **Unit III. Educational Reform outcomes:**

Community schools, Neighbourhood schools, SMART Schools, school Complex -Distance Education, Open Learning and Virtual classes- Navodhaya Vidhyalaya – Kendra Vidhyalaya, Sainik Schools, Defence Academies, De schooling, Floating University.

### **Unit IV. Educational Technology:**

Meaning – Definition- Need and Scope of Educational Technology as a complex and comprehensive approach-Educational Hardware and Software-Role of a teacher in educational technology. Technological invasion – Technophobia – Education in the global scene.

### **Unit V. Recent trends in Educational Technology:**

Self instructional methods – Personalised system of instruction (PSI)- Programmed Learning – Language Laboratory-CC TV – Computer Assisted Instruction (CAI)-Multimedia Approach- Educational Satellite-Tele and Video conferencing.



### **Suggested Readings:**

1. Dewey (1966) Democracy and Education. New York: The Free Press (Originally published in 1916)
2. Gandhi.M.K. (1952) Basic Education, Ahmedabad: Navajivan Publications
3. Gandhi, M.K. (1961) The Problem of Education Ahmedabad: Navajivan Publications
4. Neill. A.S. (1960) Summer hill; A Radical Approach to Child-Rearing. New York: Hart Patel, M.S (1953) Educational Philosophy of Mahatma Gandhi, Ahmedabad: Navajivan Publications.
5. Rogers, E.M (1983) Diffusion of Innovations. New York: The Free Press, 3<sup>rd</sup> edition.
6. Sampath. K.Panneerselvam, A and Santhanam, S. (1984) Introduction to Educational Technology.2 revised edition. New Delhi: Sterling Publishers Pvt.Ltd.
7. Selinger.M and Pearson.J (Ed)(1999) Telematics and Education. New York; Pergamon: An Imperi of Elsevier Science.
8. Shukla.P.D (1976) Towards the New Pattern of Education in India .New Delhi: Sterling Publisher.
9. Winndsehil.M (1998) The WWW and Class room Research; What path should we take?. Education Researcher: 28 (1): 28-33.
10. Wittich.W.A and Schuller.C.F (1973) instructional Technology: its Nature and Use. New to Harper & Row.

## **ED204 CONTENT CUM METHODOLOGY OF TEACHING MATHEMATICS - I**

**Credit 4:0:0**

**Marks 40 + 60**

### **Course Objectives**

The Student Teachers:

1. Acquire knowledge of the nature of mathematics and aims, objectives and values of teaching Mathematics.
2. Identify the principles of curriculum construction in mathematics with emphasis on content & organization.
3. Identity effective methods and techniques of teaching mathematics.
4. Analyse the state syllabus for standards VIII to XII
5. Develop ability to prepare and use effectively the audio visual aids
6. Develop ability to prepare Blue print
7. Develop ability to construct and administrates a diagnostic test and interpret its results.
8. Develop a sense of dedication and devotion to mathematics teaching.
9. Undertake projects to teach mathematics
10. Prepare curricular and co-curricular activities relevant to mathematical topics.

### **UNIT I**

Nature and Scope : Nature of Mathematics – Objectivity, abstructiveness, brevity and symbolism, History of Mathematics – Contributions of Euclid, Pythagoras, Bertrand Russell.



Contribution of Indian mathematician – Aryabhata, Bhaskaracharya, Brahmagupta and Ramanujam.

### **UNIT II : Aims and Objectives and Lesson Planning.**

Aims and objectives of teaching mathematics. General instructional objectives, Specific instructional objectives. Meaning importance and purpose of planning – year Plan, Unit Plan, Lesson.

### **UNIT III**

Meaning and importance of micro teaching cycle. Understanding of the components of 5 skills – Stimulus variation, questioning reinforcement, black board usage, Explanation and Link practice.

### **UNIT IV : Curriculum and Methods**

Content – Principles of selection, individual, social and national needs content course of Mathematics of classes IX and X.

Inductive, deductive, analytic, synthetic heuristic, project, problem solving and laboratory methods.

Organisation – logical, psychological, topical, spiral and integrated approaches – correlating with life, nature, other disciplines and different branches in mathematics.

Individualized techniques – homework, assignments programmed instruction and computer aided instruction (CAI) Group methods – Seminar, symposium, Workshop.

Learning resources and equipment.

Textbook, workbook library, audio-visual aids, mass media, mathematics club and its activities.

### **UNIT V : Evaluation And Statistics**

Evaluation – Different types of tests – Achievement, Diagnostic, Prognostic, Criterion reference test, Norm reference test. Blue print – Scoring key. Interpretations of test results – measures of central tendency – Standard Deviation – Rank correlation.

## **ED205 CONTENT CUM METHODOLOGY OF TEACHING PHYSICAL SCIENCE - I**

**Credit : 4:0:0**

**Marks : 40+60**

### **OBJECTIVES:**

At the end of the course the pre-service teacher will be able to

1. Realize the aims and objectives of teaching physical science.
2. Become aware of different microteaching skills and methods used in the teaching of physical science.

3. Identify the principles of curriculum construction.,
4. Construct and standardize achievement tests in physical science.
5. Understand the significance of educational technology in the teaching of physical science.
6. Emphasize criteria in selecting a good science textbook.
7. Organize and maintain physical science laboratory.
8. Ascertain the special qualities required of physical science teacher,
9. Become complete in following relevant evaluation techniques.
10. Plan relevant co-curricular activities.

### **UNIT I : Nature and Scope**

Nature and scope of Physical Science – Nature of Science – ( Product and Process) – A body of Knowledge – Areas of knowledge related to physics and Chemistry – inter-disciplinary approach.

Aims and Objectives of Teaching Physical Science Bloom's Taxonomy of Educational objectives – Aims and objectives of teaching physical science at different levels- primary, secondary, Higher Secondary, Critical Study of the objectives existing in the Tamil Nadu Text Book at different Organizing learning experiences a for achieving specific behavioral outcomes.

### **UNIT II : Curriculum, Microteaching and lesson planning**

Curriculum Construction in Physical Science – Principles of curriculum construction Criteria of selection of content matter – Organization of content matter.

Lesson Planning – Planning for teaching – developing year plans, unit plans – lesson plans – principles of lesson planning – Lesson Plans – their importance – Herbartian steps-their merits and limitations.

Micro teaching and relevant skills – Skill of Introduction – Skill of Explaining – Skill of Stimulus Variation – Skill of reinforcement – Skill of Questioning – Skill of using Blackboard – Skill of Demonstration – Achieving Closure – Need for Link lessons in Micro Teaching Programme – Macro Teaching.

### **UNIT III : Methods of teaching and educational technology**

Methods of Teaching Physical Science – Scientific method induction lecturer method - Lecture cum demonstration method – Individual Practical work as a method. Heuristic approach-project method – historical and Biographical approaches.

Modern methods of Teaching Physical Science – Group discussion, Panel discussion, simulation workshop, Seminar, symposium, team teaching, supervising study. Computer Aided Instruction, Programmed Instruction.

Educational Technology

Projects Aids – Audio Visual Aides in Physical Science, teaching – their importance – uses of Educational Broadcasts. – Radio and T.V. lessons – self-learning packages.

Audio – Video players – Tapes and CDs – OHP and transparencies slide and Film projectors, Charts Models (Static and working) Flash Cards, Pictures, Chalk, Flannel, Magnetic and Bulletin boards exhibits.

#### **UNIT IV : Evaluation and statistics**

Tests and its types, Diagnostic and Prognostic and achievement tests – Evaluation – Evaluating outcomes of science teaching – Principles of test construction. Blue print and question bank, item Analysis Reliability, Validity – Standardizing a test.

Construction administration and use of Achievement tests – Interpretation of test results. Diagnostic testing and Remedial teaching.

Statistical tools – measures of Central tendency – Mean, Median & Mode – Measures of Variability – Mean, Standard and Quartile Deviation: Correlation co-efficient. Rank order and product Movement Correlation – Graphical representation of Data – Bar and pie Diagram, Histogram, Frequency polygon- Cumulative Frequency Curve, Ogive.

#### **UNIT V : Science teacher, laboratory and text book**

Science teacher – academic and professional growth – special qualities – inservice training – co-curricular activities – organization and orientation of science clubs – science exhibitions and fairs; field trips and excursions. Physical Science laboratory – structure design – organization and maintenance of science laboratory – maintenance of registers – storage of chemicals – organization of practical work. Improvisation of apparatus – accident and first aids.

Qualities of a good science textbook, use of science text books inside and outside the classroom. Criteria for evaluation of science textbook. Science libraries; values of school sciencelibrary.

A knowledge of all the concepts in physics and chemistry upto X Std.

#### **PRACTICAL WORK**

1. Construction and use of achievement test. Analysis and interpretation of test scores.
2. Making 10 charts and 3 improvised apparatus.
3. Practicing 5 micro lessons with 5 different skills
4. Preparation of laboratory instructional cards.
5. Conducting an investigatory project on any science topic and presenting the report.
6. Participating in at least two seminars ( in B.Ed., topics) Presenting two papers.
7. Presenting one demonstration to the peers.
8. Making 3 slides and one filmstrip.
9. Preparation of a programme of 20 frames on Physics or Chemistry topic.
10. Preparing a Science album with Internet materials of Scientific issue and website reports.
11. Identification and cataloguing of three websites relating to the prescribed school curriculum.
12. A comparative evaluation of any two Web pages bearing on the same unit in the school curriculum.

## REFERENCES

1. Anderson, R.D et al, 1992, Issues of Curriculum Refrom in Science, Mathematics and Higher order Thinking Across the disciplines. The Curiculum Refrom Project, University of Coloradio, U.S.A.
2. Carin & Robert Sund, 1989. Teaching Modern Science (Fifth Edition) Merrill Publishing Co., U.S.A.,
3. Edgar Dale, Audio-Visual Methods in Teaching. Revised Edition. The Dryden press, Newyork.
4. Garrett, Statistics in Psychology and Education, Vakils Feffer and Simons Ltd., Bombay 1979.
5. Gupta S.K., Teaching of Physical Science in Secondary Schools Sterling's Publication (Pvt) Limited, 1985.
6. Heiss. Obourn & Hoffman, Modern Science in Science and Technology Education, Vol. VI UNESCO, Paris.
7. Joseph, The Teaching of Science, Harvard University Press 1966.
8. Kerr, S.T. (Ed.) Technology and the future of schooling, University of Chicago press, U.S.A.
9. Newbury N.F. Teaching of Chemistry in Tropical Secondry Schools, Oxford University press.
10. Nair, C.P.S ., Teaching of Science in our / schools, Sulthan Chand & Co. (pvt) Limited 1971.
11. Owen, C.B., Methods of Science Master, The English Language Society and Macmillan Company Limited, 1966.
12. Panneerselvam. A., Teaching of Physical Science (Tamil) Government of Tamil Nadu 1976.
13. Patton, M.O., 1980, Qualitative Evaluation Methods, Sage Publications, India
14. Rao, C.S., Science Teacher's Handbook, American Peace Crops 1968.
15. Saunders, A.N. Teaching of General Science in Tropical Secondry School, printed in Great Britain by Butter and Taunen Limited, London, 1955.
16. Summer, W.I. Teaching Of Science, Oxford, 1945.
17. Sharma, R.C., Modern Science Teaching, Dhanpat Raj and Sons, 1985.
18. Thurber, Walter A., and Collettee Alfred, T., Teaching Science in Today's Secondary School, Prentice Hall of India Pvt. Ltd., 1964.
19. UNESCO. 1973. Final Report: International Forum on STL for All, UNESCO, Paris.
20. UNESCO, 1979, The UNESCO Source Book, for Science Teaching. UNESCO. Paris.

## JORNALS

1. Science Education International, ICASE
2. Current Science, IISC, Bangalore.
3. School, Science, NCERT, New Delhi.
4. Science Teacher – ( Monthly), Editorial and Executive Officers. 1201, Sixteenth St., N.W. Washington.
5. Science Today - (Monthly) Ganga Gritha 3<sup>rd</sup> Floor, 6-D, Nugambakkam High Road, Madras 600-034.

6. Science Reported – (Monthly) Publications and Information Directorate (CSIR)  
New Delhi.

**WEB SITES:**

HYPERLINK “<http://www.sciedu/nsrc.com>” [www.sciedu/nsrc.com](http://www.sciedu/nsrc.com)

HYPERLINK “<http://www.nerdword.com>” [www.nerdword.com](http://www.nerdword.com)

HYPERLINK “<http://www.12systems.com>”

[www.12systems.com](http://www.12systems.com)

HYPERLINK “<http://www.ncert.nic.in>” [www.ncert.in](http://www.ncert.nic.in)

HYPERLINK “<http://www.unesco.org>” [www.unesco.org](http://www.unesco.org)

**ED206 CONTENT CUM METHODOLOGY OF TEACHING BIOLOGY – I**

**Credit 4:0:0**

**Marks 40+60**

**Objectives:**

- a) To enable the student teachers to understand the basic principles and practices of Science Education relevant to teaching Biological Science in the Secondary and Higher Secondary Classes.
- b) To help the student teachers to learn appropriate teaching techniques.
- c) To enable the student teachers to acquire adequate skills in using proper and suitable methods of teaching Biology.
- d) To enable the student teachers to acquire the knowledge relating to the organization and administration of a Biology laboratory, curriculum and co-curricular activities that would promote the teaching of Biology and develop in pupils the scientific attitude and a sense of appreciation and interest in Biology.
- e) To guide the student teachers in acquiring skills in constructing tests
- f) To develop the student teachers’ ability to construct a curriculum and to evaluate critically the present curriculum.
- g) To develop in the student teachers, skill in preparing and using the appropriate instructional material in Biology.

**UNIT I : Nature, Scope, Aim and Objective.**

Biology in the School curriculum – its claims for inclusion – Relation between Biology. Areas of knowledge related to Botany & Zoology – Interdisciplinary approaches in the school curriculum.

**UNIT II : Lesson Plan, Curriculum And Microteaching**

Lesson planning-importance of lesson plans-Writing Instructional Objective-Planning for specific behavioural changes. Preparation and use of unit plan – Teaching and teaching aids

evaluation, Recapitulation and Assignments. Critical study of the objectives of the Tamil Nadu Text Book Curriculum at different levels.

Communication skills with reference to Microteaching – Verbal and non-Verbal communication – Microteaching skill of explaining, skill of black-board writing, Skill of stimulus variation, skill of reinforcement, Skill of questioning; Probing questioning, Skills of Demonstration, Introduction, Achieving closure – Cycle of operation, Need for a Link Lesson – Macro Teaching.

### **UNIT III : Methods, Educational Technology and Evaluation**

Criteria for selection of a method – Level of the class, size of the class, available time and subject matters. Approaches – Inductive, Deductive, Analytic, Synthetic, Heuristic, Dalton Plan.

Instructional technology and its application to the teaching of Biology. Programmed instruction, Teaching machines, personalized instruction, computer assisted instruction, Teaching Machines, Special methods – Lecture, demonstration, laboratory, project, scientific methods, seminar, symposium, workshop, panel discussion, biographical and historical method, team teaching and assignment method.

Test and its types – Diagnostic, Prognostic and Achievement test, Criterion and Norm referenced tests – Principles of test construction, Blue Print and Question Bank.

Measures of central tendency : Arithmetic mean, median mode. Measures of variability : range, quartile deviation, average deviation, and standard deviation, use and interpretation.

Graphical Representation of Data & Pie Diagram, Histogram, Frequency Polygon, Cumulative Frequency Curve, Ogive, Percentile Ranks, Normal Probability curves & Kurtoses.

### **UNIT IV : Laboratory and Text Books**

- a) Practical work in Biology : Importance of practical work organizing the work of the practical class – Laboratory – Accidents and First Aid – safety – school Biology Record writing notes and drawings.
- b) Museum – Importance of museum – Preparation of museum materials – field trip, maintenance of Aquarium, Vivarium & Terrarium.
- c) Qualities of a good Biology text book – Use of text books in and outside the classroom – Values of a school Biology library – Divisions of Library.

### **Unit V : Science Teacher and Co-Curricular Activities.**

Academic qualifications – Professional training special qualities required of a science-teacher in-service training. Class Room Climate; Flanders interaction analysis.

Importance of co-curricular activities in Biology. Nature club – Projects – Importance of projects – examples – conservation and development of awareness about eco systems – nature calendar, Exhibitions.



## PRACTICALS

1. Making charts, improvised apparatus and models.
2. Practice of a minimum of 2 skills under microteaching (Proper records to be maintained)
3. Preparation of laboratory instruction cards.
4. Planning and conducting any four practical classes in Biology and maintaining a record of practical work.
5. Preparation of a unit test for a unit in Biology.
6. Designing and carrying out of any one simple investigation in Biology.
7. Collecting and preserving biological specimens.
8. Collecting and keeping plants and animals alive for instructional purposes-aquarium, terrarium and vivarium.

## References:

1. Buffaloe Neal and Thronebery, J.B., *Principles of Biology Teaching*, Prentice-Hall of India Limited, 2<sup>nd</sup> Edition, New Delhi, 1972.
2. Chauhan S.S., *Innovations in teaching learning process*, Vikas publishing House, New Delhi, 1985.
3. Garrett, H.E. *Statistics in Psychology and Education*, Vakils Feffer and Simons Ltd., Bombay 1979.
4. Green, T.L., *The Teaching of Biology in Tropical Secondary School*, Oxford University Press, 1965.
5. Heiss E.D., Obown. S. and Hoftman C.W., *Modern Science Teaching*, Macmillan Company Press, New York, 1961.
6. Jean Bremmen, *Teaching of Biology*, Macmillan, St. Martin's Press, New York.
7. John S. Richardson, *Science Teaching in Secondary Schools*, Prentice Hall, 1962.
8. Joseph, J. Schwab T., *Teaching of Science*, Harvard University Press 1964.
9. Miller and Blaydes, *Methods and Materials for Teaching Biological Science*, McGraw Hill, 1962.
10. Nair, C.P.S., *Teaching Science in our Schools*, S. Chand and co (Pvt.) Limited 1971.
11. Saunders, H.N., *the Teaching of General Science in Tropical Secondary School*, Oxford University Press London 1967.
12. Sharma R.C. *Modern Science Teaching*, Dhanpati Rai and Sons, 1985.
13. Walter A., Thurber and Alfred T. Collette, *Teaching Science in Today's Secondary Schools*, Prentice Hall 1964.
14. *Biology A text Book for Higher Secondary Schools* (Section 1-7).

## ED207 CONTENT CUM METHODOLOGY OF TEACHING COMPUTER EDUCATION - I

Credit : 4:0:0

Marks : 40+60

### To enable the Teachers:

1. To acquire the knowledge of computer science
2. To understand computer, its kinds, its parts and uses in secondary and higher secondary schools (Hardware and Software)
3. To understand the general and specific skills in teaching computer science.



4. To acquire the knowledge of Lesson Plan Writing and Micro-Teaching skills.
5. To familiarize with the various methods of teaching computer science.
6. To acquire the knowledge of tests, Blue print, Evaluation and remedial measure.
7. To develop skill in Office Automation : MS Office 2000, MS Word 2000 and MS Excel 2000.

### **Unit I : Nature and Scope**

Brief history of development of computers - Nature and scope of computer science - Types of computers - Uses of computers in school teaching - Computer Hardware, its parts and importance of computer - Computer Software, its importance and uses - The computer generations - Printers : Laser and Jet Printers.

### **UNIT II : Aims, Objectives, Microteaching And Lesson Planning**

General and Specific instructional objectives of teaching computer science, Bloom's Taxonomy. Herbarian steps and Lesson Plan Writing at Primary, Secondary and Higher Secondary levels. Micro-teaching skills : Explaining, Reinforcement, Probing- questions.

### **UNIT III : Methods**

Inductive and Deductive methods of Teaching Computer Science Heuristic method. Laboratory method. Programming Learning : linear Programming and Branching Programming. Computer Assisted Instructions (CAI) and Computer Managed Learning (CAL)

### **UNIT IV : Applications**

MS Office Introduction, Editing in Office, Selecting, Moving, Copying, working with files, fonts and font styles, editing document texts. MS Word 2000 Introduction, typing letters and editing, printing. Using spell check and Theasurus. Designing a cover page and word art. MS Excel Entering and changing information and formula, Admission detail of students in various courses. Printing graphs and charts for the given data.

### **UNIT V : Curriculum and Evaluation**

Principles of curriculum development – criteria of selection of content and principles of organizing the selected content. The concept of evaluation – evaluation for achievement diagnosis and prediction – various kind of test – principles of construction and administration of an achievement test characteristic of a good test – Blue print – On-line examination.

### **References**

1. Chauhan, S.S., Innovations in teaching Learning Process, Vikas, Publishing house, New Delhi-1985.
2. Gear, C.W., Computer Organization and programming, McGraw Hill Publishing company – 1986.
3. GregPerry, Teach yourself Windows in 24 Hours, Techmedia Publishing company – 1998.
4. Gorden, B.Davis, introduction to computers, McGrew-Hill Publishing company-1982.
5. Passi, B.K., Becoming a better Teacher and Micro Teaching approaches, Sahitya Mundralaya, Ahamadabad, 1976.

6. Rajaraman, V. Fundamentals of computers, Prentice Hall of India Pvt. Ltd., New Delhi-1996.
7. Siddigi, N.N. and Siddigi,M.N., Teaching of science4 Today and Tomorrow, Doaba House, New Delhi-1998.
8. Stanley Progrow, Education in the computer age, Sage Publications, India – 1983.
9. Stephen L.Nelson, Office 2000. The Complete Reference, Tata McGraw Hill Publishing Co.Ltd.
10. Taxali,R.K., PC Software for windows made simple, Tata McGraw Hill India Ltd., New Delhi - 1998.

### **ED208 CONTENT CUM METHODOLOGY OF TEACHING ENGLISH - I**

**Credit : 4:0:0**

**Marks : 40+60**

**Objectives:**

1. To familiarise the teacher – trainees with the various aspects of the B.Ed. Programme with special reference to the nature of the language skills to be developed.
2. To enable the teacher trainees to acquire knowledge of the sound system of English.
3. To train student teachers in strategies and current techniques of English teaching.
4. To foster the habit of examining syllabi and teaching materials.
5. To enable the teacher trainees to acquire an understanding of role, nature, status and rationale for learning English.

**Unit - I.**

**(a) Preliminary Statement:**

1. The role of English in India today – The cause for learning English
2. The objectives of teaching English - general instructional objectives – specific instructional objectives.
3. Teaching English as a ‘Skill’ rather than a ‘knowledge’ subject.
4. Teaching the four basic skills – listening – speaking – reading – writing.
5. Learning the mother tongue and learning a second language – interference and Transfer from the mother tongue – implication for the methods of teaching.

**(b) Teaching Skills:**

1. Benjamin. S. Bloom’s Taxonomy of Educational objectives – cognitive – Affective – Psycho motor domains.
2. Micro – teaching – Principles – skills introducing the lesson – Explanation – using the Blackboard – Reinforcement – stimulus variation – Questioning – Link lesson.
3. Observation – Demonstration lesson - Teacher Educator – Guide Teacher – Peer group.
4. macro teaching – Lesson Plan – Teaching prose – Teaching Poetry – Teaching grammar – Teaching English composition – Teaching Aids – Evaluation.

## **Unit – II.**

### **(a) Listening skill:**

Different kinds of listening material – Listening activity – The phases of a listening class – listening for perception – listening for completion – listening activities – use of listening aids.

### **(b) Reading:**

1. Methods of teaching reading to beginners.
2. Reading comprehension – Errors in comprehension – silent reading – loud reading – skimming – scanning.
3. Teaching of vocabulary – Active and passive vocabulary – vocabulary island – content words and structural words – criteria for selection of vocabulary.

## **Unit – III.**

### **(a) Methods of Teaching:**

1. Method – Design – Approach.
2. Approaches to syllabus construction – situational – Oral – structural approach – skill – based – communicative – Notional.
3. Methods of Teaching English – grammar – Translation – biolingual – Direct – Situational – structural communicative method.

### **(b) Speaking:**

1. Communicative competence – Importance of spoken English – methods to teach spoken English.
2. Pronunciation – Elements of English phonetics – Sounds vowels – consonants – sounds – Rhythm – Intonation.
3. Oral practice in new language ideas – types of drills – repetition drills – substitution tables – manipulation drills – parallel sentences.

## **Unit- IV.**

### **(a) Writing:**

1. Writing skills – Mechanical skills – grammatical skills – Discourse skills – Integument skills
2. Handwriting – Developing good handwriting – print script writing – cursive writing – speed writing.
3. Types of composition exercises – controlled – guided - Free – Oral composition - Group work – mixed ability grouping – marking code.

### **(b) Statistics:**

Drawing up a frequency distribution – Measures of central Tendency – Mean, Medium, Mode – Measures of variability – range – quartile derivation – Average Derivation – standard derivation – correlation – Rank Difference method – graphical representation – Histogram – Frequency polygons – cumulative frequency curve.

## **Unit – V.**

### **(a) Educational Technology:**

1. Teacher need aids - Mechanical Aids
2. Language Laboratory – Programmed learning.
3. Computers Assisted Instruction – Teleconferencing – Question Bank.

### **(b) Evaluation:**

1. Characteristics of a good test – Objectivity – Reliability – validity – Feasibility – Item analysis – Item Difficulty – Index – Blue print.
2. Testing Oral Skills – Pronunciation and fluency – Testing grammar and usage – Testing reading skills – Testing vocabulary - Testing writing skills.
3. Practical Teaching.

### **Reference:**

1. Welbring D.A.(1978) National Syllabus, Oup.
2. Frisby. A.W. (1970) – Teaching English, Langman.
3. Alexander L.G ( 1971) – Guided Composition in English Language Teaching, Langman.
4. Bright J.A. and Mc Geepor G.P. (1976), Teaching English as a second language, Longman.
5. Billions J. L. (1962), The teaching of Language teaching.
6. Dahin (1967), The Language Laboratory and language learning, Langman, London.
7. Pit Corder S. (1976), Introducing Applied Linguistics, Penguin Books.
8. Hornby A.S. (1969), The Teaching of structural words and sentence pattern.
9. Gillian Brwson, (1977), Listening to spoken English: Applied Linguistics and language, Langman.
10. Oxford Advanced Learner's Dictionary.

### **Practical Component (work)**

1. Preparation of Micro teaching materials – lesson – caching sheet
2. Preparation of observation schedules.
3. Practice in Phonetic transcription.
4. Reparation of lesson plan – teaching aids.
5. Preparation of flash cards- charts – albums – scrap book.
6. Preparation of communication panel.
7. Practice in use of tape recorder radio lesson, CAI.
8. Preparation of self learning package.
9. Preparation of blue print – question paper.
10. Examination of English Readers - prose – poetry – grammar lesson.
11. Examination of minimal pairs – rhyme schedule.
12. Reading comprehension exercise.
13. Learning from resources.
14. Preparation of materials of composite scene.
15. Preparation of material for picture composition.
16. Preparation of models for teaching.
17. Construction of Achievement test with subjective and objective types of test.
18. Examination of different dictionaries for reference work.
19. Preparation of transparencies for OHP, and slides.
20. Examination of different types of composition exercises.

## ED209 CONTENT CUM METHODOLOGY OF TEACHING MATHEMATICS II

Credit : 4:0:0

Marks : 40+60

### UNIT I : Theories of Learning Mathematics

Psychology of learning Mathematics – Formation mathematical concepts. the ideas of Piaget and Bruner – factors influencing the learning of Mathematics – motivation, maturation, perception, special abilities, attitude and aptitude – Divergent thinking in Mathematics.

Programmed learning – classroom interaction analysis – modification of teacher behaviour with special reference to mathematics teacher.

### UNIT II : Models of Teaching and Mathematics Education

Concept attainment model – advanced organising model – inquiry training model.

Current trend in curriculum changes in Mathematics education – a critical analysis of existing teacher education programme in Mathematics – content course of Mathematics of classes IX, X, XI and XII.

### UNIT III : Computer in Mathematics Education

The role of computers in mathematics education at various levels. Relevant computer science topics and techniques.

### UNIT IV : Research in Mathematics

Meaning need for research in mathematics education – qualities of a good researcher – problems faced in research in mathematics education.

### UNIT V : Evaluation and Statistics

Normal Probability Curve, Skewness, Kurtosis. Note : Students of optional “mathematics” are to be familiarized with the latest – Tamil Nadu Curriculum for Business Mathematics” prescribed for Higher Secondary Classes.

### Practical Work

1. Construction and administration of an achievement test in Mathematics unit of standard XI and XII.
2. Practicing three micro lessons with these different skills.
3. Practical training in using FIAS, analyzing data using matrix techniques.
4. Preparation of three improvised apparatus.
5. Preparation of a branched programme.
6. Critical analysis of existing Tamil Nadu State Board Mathematics Syllabi for classes IX, X, XI and XII.

### References:

1. Ball, W.W.R. A short history of mathematics, Cambridge University Press, 1908.
2. Bell, E.T., The Development of mathematics McGraw Hill Book Company, 1945.
3. Butter, C.H.& Wren F.L, The teaching of secondary mathematics, McGraw Hill Book Company, 1965.
4. Damayanthi Bagyanathan, Teaching of Mathematics (Tamil) Tamilnadu Text

5. Book Society, madras.
  6. Kuppaswami Ayyanagar, N, The teaching of Mathematics, A universal publication 1964.
  7. Parthasarathy – Kanitham Karpithal The South India Saiva Siddhanta works 1961.
  8. Sundararajan.S, Theory and Practice of Teaching School mathematics, Theory and Practice of Teaching School mathematics, The teacher's publishing House, 1960.
  10. NCERT. A Text Book of Content-cum-methodology of Teaching mathematics New Delhi, NCERT.
1. NCERT: Improving instruction in mathematics
  2. Sidhu .K.S (1984) The teaching of mathematics, New Delhi: Sterling publication Pvt Ltd.
  3. The current text books in Tamilnadu for standards VI to XII.

### **ED210 CONTENT CUM METHODOLOGY OF TEACHING PHYSICAL SCIENCE II**

**Credit : 4:0:0**

**Marks : 40+60**

**OBJECTIVES:**

At the end of the course the pre-service teacher will be able to

1. Appreciate the place of Physics and Chemistry in the modern World.
2. Understand the Psychological basic of modern trends in teaching Science.
3. Explore activities related to Physical Science content.
4. Construct and standardize diagnostic and aptitude test in Physical Science.
5. Become competent in evaluating Physics and Chemistry books under different curricula.
6. Plan, organize and maintain Higher Secondary level Physical and Chemistry laboratories.
7. Involve in action researches which could extrapolate their mind for fundamental research.
8. Identify the various problems in Indian and in the world and suggest solutions involving the role of science.

**UNIT: I**

The meaning of Science – Different branches of Science – Globalization and Science – Discoveries and Development in Science.

Justification for including Physics and Chemistry Separately at Higher Secondary level. Modern trends in teaching of Science, Different Taxonomies Psychological basis of methods in Science teaching – Gagne, Bruner, Piaget – Models of the teaching Physical science with one illustration for each type of model.

**UNIT II**

Educational Technology in Science Education – Development of programmed instruction materials - Teaching machines – Computer Assisted Instruction.

Developing lesson plans using the principles of Piaget, Bruner and Gagne. Activity approach in preparing lesson plans. Power point presentation.

### **UNIT: III**

Evaluating of teaching – Construction of diagnostics test – Construction of aptitude test. Norms testing for scientific attitude and skills objective based testing.

Text books – Physics, Chemistry – Evaluation of different types of text books – CBSE, SSLC, ICE, etc.,

### **UNIT : IV**

Organization and maintenance of separate laboratory for Physics and Chemistry  
Organization of practical work including preparation of bench solution of Chemistry, etc.,  
Catering the individual differences, Identification and care of the scientifically talented pupils, Natural Talent Examination, Helping slow and gifted learners.  
Research in Science Education – Identifying problems in teaching of Science - Techniques of conducting and evaluating Research in Science Education.

### **UNIT: V**

Problems of Science Teaching in Urban and Rural areas – Global problems – Pollution – Diseases – Global Warming, Over population, Malnutrition, Superstitious beliefs.  
How science teaching can help in solving them Developing scientific temper among the people in the society.

A knowledge of all the concepts in Physics / Chemistry upto XII standard.

### **PRACTICAL WORK**

1. construction and standardization of diagnostic test in a Physics or Chemistry unit of standard XI or XII.
2. Practicing (3 sessions each of ten minutes) classroom interaction analysis and presenting the report.
3. Preparation of 3 improvised apparatus that could be used for standard XI or XII.
4. Construction of aptitude test in Science.
5. Preparation of branched programmed material consisting of twenty frames, in science.
6. Preparation of a lesson plan for power point presentation.
7. Collecting instructional materials on two topics in Physics or chemistry that could be used in the classroom.
8. Evaluating reports of three websites in science.

### **REFERENCES:**

1. Brandwein Paul, E., The Gifted as Future Scientist, New York, Earcourt Dcace and World Inc., 1955.
2. Chauhan, S.S. Innovation in Teaching and Learning Process, Vikas Publishing House, 1985.
3. Falvery, P., Holbrook, J., Conian, D., 1994 Assessing Students, Longmans Publications, Hongkong.
4. Garret, Statistics in Psychology in Education, Vakils, Feffer Simons Ltd., Bombay, 1979.



5. Harns. N., Yager, R. 1981, What Research says to the science Teacher, Vol 3, National Science Teachers Association, Washington D.C U.S.A.
6. Hoiss, Oburn & Hoffiman, Modern Science Teaching, Macmillan & Co, Ltd., New York, 1961.
7. Husen. T., Keeves, J.P. (eds), 1991, Issues in Science Education, Pergamon Press, Oxford.
8. Jenkins. E.W., 2000, Innovations in Science and Technology Education Vol VII. UNESCO, Paris.
9. Khana, S.D., Sexena, V.R. Lamba, t.P. and Murthy, V., Technology of Teaching, Doaba House, 1976.
10. Mee. A.J., A Modern Chemistry for Schools, J.M. Dent & son Ltd., Bedford Street and London, 1967.
11. Natarajan, C., (ed), 1997. Activity Based Foundation Course on Science Technology and Society. Homi Baba Center for Science Education, Mumbai. Panneerselvam, A., Teaching of Physical Science (Tamil), Government of Tamil Nadu, 1976.
12. Passi, B.K. Becoming a Better Teacher, Micro Teaching Approach.
13. Sharma, R.C. Modern Science Teaching, thanpat Rai and Sons 1985.
14. Saunders, H.N., The teaching of General Science in Tropical Secondary School, Oxford University Press, London 1967.
15. Thurber, Walter, A., and Collettee, Alfred, T. Teaching Science in Today's Secondary School, Prentice Hall of India Pvt. Ltd., 1964.
16. Chemistry Text Book, Lab Manual and Teachers Guide Book, NCERT Publication 1964.
17. Ncert 1997, Fifth Survey of Research in Education, NCERT, New Delhi.
18. Nuffield Chemistry, Books of Data, Collection of Experiment, Published for the Nuffield Foundation by the Longmans, Penguin books.
19. Nuffield Physics , Teachers Guide, Questions Book, Guide to Experiments, Published for the Nuffield Foundation by the Longmans, Penguin Books.
20. P.S.S.C., Physics Teachers Resource book and guide, NCERT publication, 1964. UNESCO 1993. Final Report: International Forum on STL for all. UNESCO, Paris.
21. UNESCO-ICASE. Delhi University 2000, STL for all materials, UNESCO, New Delhi.
22. Williams, B. 1999, Internet for Teachers John Wiley and Sons, U.S.A.

#### **JOURNALS:**

1. Journal of Research in Science Teaching, NATSTt, Washington D.C U.S.A., School of Science NCERT, New Delhi.
2. Science Teacher – (Monthly), Editorial and Executive Officers, 1201. Sixteenth street, N.W., Washington.
3. Science Today – (Monthly), 'Ganga Criha' 3<sup>rd</sup> Floor , 6-D, Nungambakkam High Road, Madras 600 034.
4. Science Reporter – (Monthly), Publication and Information Directorate (CSIR), New Delhi.

#### **WEBSITES:**

HYPERLINK "<http://www.edusite.com>" [www.edusite.com](http://www.edusite.com)

HYPERLINK "<http://www.ejse.com>" [www.ejse.com](http://www.ejse.com)

HYPERLINK [http://www.ed.gov/databases/ERIC\\_Digests](http://www.ed.gov/databases/ERIC_Digests)  
[www.ed.gov/databases/ERIC\\_Digests](http://www.ed.gov/databases/ERIC_Digests)  
HYPERLINK <http://www.slesp.com> [www.slscsp.com](http://www.slscsp.com).

## ED211 CONTENT CUM METHODOLOGY OF TEACHING BIOLOGY II

**Credit : 4:0:0**

**Marks : 40+60**

### **UNIT I : Models of Teaching Biology**

Introduction – Definition – Characteristics – Functions – Sources – elements of a model – types – With one illustration for each type model of Psychological basis of methods of sense teaching, Gagne, Burner and Piaget.

Class Room Interaction Analysis – Nature Objectives – Assumptions – Flanders interaction analysis – Concepts and principles of teacher influence. Teaching behaviour & learning Goals – Implications and Limitations .

### **UNIT II : Co-Curricular Activities**

Importance of co-curricular activities in Biology, Nature club – Projects – Importance of projects – examples – conservation and development of awareness about eco systems – nature calendar, Exhibitions.

### **UNIT III : Classification and Genetics**

Broad classification of plants & animals and the significance of classification in the study of Biology.

Human physiology in brief: Genetics – Genetic engineering – significance – harmful effects – Mutations – significance of mutations in crops, humans and plants – G.M. crops. Gardening.

### **UNIT IV : Ecology and New Developments**

Ecology - Its importance in school curriculum – pollution – harmful effects awareness – afforestation and other remedial measures. Climate change – causes – harmful effects – Biological repercussions

New Developments in Biology – Bio Chemistry, Bio physics, developmental Biology – Neurological effects on behaviour (in brief) Radioisotopes

### **UNIT V : Enrichment**

Enrichment and remedial science programmes – Programme for the gifted Grouping – Science Talent Search programmes.

### **PRACTICALS**

1. Microscopy – cells – cell division Preparation of micro slides – use of camera lucida
2. Design and implementation of an investigatory project
3. An improvised biology model.

### References:

1. Alternbury, Genetics, Oxford and IBM, 1970.
2. Buffaloe, Neal and Throneberry, J.B. *Principles of Biology*, Printice-Hall of India Limited. 2<sup>nd</sup> Edition, New Delhi 1972.
3. Carl. P. Swanson, *The Cell*, Prentice Hall of India, 1971.
4. Carison, *Gene Theory*, Dickenson Publishing Company 1967.
5. James H. Otto and albert Towle, *Modern Biology*, Holt, Rinehart and Winston, Inc. 1973.
6. James F. Relay, *Introducing Biology*, 1967.
7. John Maynard Smith, *The Theory of Evolution*, 1972.
8. Moon, Man and Otto, *Modern Biology*, Henry Holt and Company, New York 1973.
9. Pedder and Wynne, *Genetics*, Hutchinson Educational Ltd., 1972.
10. Paul C. balley and Kenneth A. Wagner, *An introduction to Modern Biology*, International Text Book Company, Saranton P.A. an Intext Publisher, 1972.
11. Sarada Subramanyam and Madhavan K. Kuttu, *Text Book of Physiology*, Oriental Longman, 1977.
12. Selmes, C., *New Movements in the study and Teaching of Biology*, Temple Smith London.
13. Sinnott, Dunn and Dobahansky, *Principles of Genetics*, Tata Mcgraw Hill Publishing Company Ltd., New Delhi, 1970.
14. Smart, W.A.M., *Human Physiology*, Longmans, 1960.
15. Swanson Mera and Young, *Cytogenetics*, Prentice Hall of India Ltd., 1973.
16. Swanson, *Cytology and Cytogenetics*, Macmillan Company of India Limited, 1972.
17. Victor A. Makusick, *Human Genetics*, Prentice Hall of India Pvt., Ltd. 1972.
18. Zachariah, Elizabeth. *Teaching of Biological Science in Schools*.

### ED212 CONTENT CUM METHODOLOGY OF TEACHING COMPUTER EDUCATION II

Credit : 4:0:0

Marks : 40+60

#### To enable the student – teachers:

1. To develop interest and appreciate various pedagogical principles in teaching of computer science.
2. To acquire the knowledge of computer systems.
3. To develop skill in 'C' Language.
4. To develop skill in writing learning packages: M.S\_power point and MS\_Access.
5. To grasp programmes in Visual Basic.
6. To develop skill in designing web sites using HTML.
7. To understand the concepts of E\_Learning and latest trends in information technology.

#### COURSE CONTENTS:

##### Unit-I

- 1.1 Need for planning the computer laboratory.
- 1.2 Special features of computer lab.

- 1.3 Settings up the computer lab and infrastructure.
- 1.4 Seminar, Symposium, group discussion, panel discussion, workshop techniques.
- 1.5 Class room interaction analysis.

#### **Unit-II**

- 2.1 Types of computers.
- 2.2 Anatomy of a computer.
- 2.3 System board.
- 2.4 Digital versus analog.
- 2.5 Central processing unit.

#### **Unit-III**

- 3.1 Fundamentals of C Language.
- 3.2 Character set, C constant, C Variables.
- 3.3 Operators, Control Structures, Loop structures, Arrays and Structures.
- 3.4 Functions, Library functions.
- 3.5 Developing simple C Programs.

#### **Unit-IV**

- 4.1 Office automation.
- 4.2 MS\_Powerpoint, creating, creating, presentation, Building presentations, Modifying visual elements, animation effects and linking preparing handouts.
- 4.3 MS\_Access, Planning and creating tables, Creating and using forms, modifying tables.

#### **Unit-V**

- 5.1 Introduction to Visual Basic, the VB Screen, the single document interface environment, the help system-tool bars the tool box and custom controls and components. Using the file menu, using the view menu, using the project menu, using the font menu etc,
- 5.2 Introduction to HTML: Document, Anchor tags, head and body section, banner, base element, colorful web page, designing the body section, heading paragraph, formatting characters, font tag, images and pictures.
- 5.3 E-learning CAI, ICAL, ICAT. Designing CAI Lesson, common CAI frames, Teaching Frames, etc....

#### **References:**

1. Balaguruswamy, E., Programming in Ansi C, Ed. 2.1, TMH.
2. Flanders, A. Analyzing teacher behavior, Addison Willelsy Publishing Co. USA, 1979.
3. Gary Cornell, Visual Basic 6.0 From the ground up, Tata McGraw Hill, Ed., 2002, [11<sup>th</sup> Reprint].
4. Gine Courter and Annette Marguis, Microsoft office 2000, No experience needed, BPB Publication.
5. Kalkota and Whinston, Frontiers in Electronic commerce, Golgota {publications Pvt., Ltd., New Delhi-2000.
6. Peter Norton, Introduction to computers [4<sup>th</sup> Edition] TATA McGraw Hill.
7. Rick Darnell, et all., HTML 4, Techmedia, New Delhi, 1999.

8. Sanjay Saxena, MS\_Office 2000 for every one, Vikas publishing House Pvt., Ltd., New Delhi, 2001.
9. Thayer, Visual Basic 6.0, Techmedia, New Delhi.

## **ED213 CURRICULUM DESIGN & EVALUATION**

**Credit : 4:0:0**

**Marks : 40+60**

### **Objectives:**

At the end of the course the student teacher will

1. understand the concept and definitions of curriculum
2. understand the advantages and constraints of each types of curriculum
3. understand and apply the process of Curriculum Development
4. be able to select and apply appropriate strategies for Curriculum Transaction
5. be able to evaluate curricula.

### **Unit I :Concept and Definitions**

Concepts of curriculum – Classifications of Curriculum Concepts : Definitions – Curriculum & syllabus – relationships and differences; Need for Curriculum Development ; Curriculum Determinants; National aspirations & needs, Culture, Social Change, Value System , Philosophical, Sociological and Psychological foundations.

### **Unit II :Types of Curriculum**

Curriculum Organization – Educational Objectives & Curriculum Organisation; Selection of learning experiences – 21<sup>st</sup> Century object of education (UNESCO Report 1996); Subject matter & Curriculum Organization, ABC's curriculum organization; Learning & Curriculum organizations; Types of Curricula – Subject Centered, Co-related, Fused, Core, Student-Centered – Their relative values and weakness.

### **Unit III : Curriculum Design**

Assessing Needs; Formulating Objectives, Selection of Contents; Organization of Control; Selection of Learning experiences; Organization of learning experiences – Models of curriculum Development; Ralph Taylor, D.K., Wheeler and Hilda Taba.

### **Unit IV : Curriculum Transaction**

Strategies for Curriculum Transaction – Organisation for Instructions, Models of teaching; Team teaching – Individualizing the Curriculum – Distance learning modes – Resources for Curriculum Transaction – Computer and the Internet.

### **Unit V : Evaluation of Curriculum**

The Curriculum cycle – Evaluation as comparing objectives and outcomes – Focus of Curricular Evaluation; Subject content, organization and mode of transaction – Outcome of curriculum Evaluation Change / refinement of content, Organization and modes of transaction – Evaluation of students achievement – Procedure of type

Models of curriculum evaluation. Taylor's Model, Stane's Model, CIPP Model – Goal Free evaluation

**Practical Work:**

1. Analysis of a textbook based on the principles of curriculum
2. Preparation of syllabus for a subject of your choice
3. Critical evaluation of the higher secondary level syllabi prescribed in Tamilnadu

**Suggested Readings:**

1. Babu. E.C. (1971) Curricular Development Projects. In L.C.Deighton (Ed) Encyclopedia of Education (Vol.2) New York, Macmillan.
2. Bloom, B.S. (1965) – Taxonomy of Educational Objectives – Handbook 1: Cognitive Domain; Longmans. Green & Co
3. Bruner, J.S. (1960) The Process of Education; Harvard, Cambridge, University Press
4. Fettuman, David.M (1983) Webs of Learning: Computer and Internet Resources for Educational Research and Institution Educational Researcher pp 22 to 30
5. Foshay.A.W.(Ed) (1980) Considered Action for Curriculum Improvement : Association for Supervision and Curriculum Development yearbook, Alexandria, Va: ASCO
6. Goodlad, J.I. & Associates (1979) Curriculum Enquiry; The study of Curriculum Practice, New York, McGraw Hill
7. Hays, H.E.(1977) Curriculum Development as a Moral Enterprise, Curriculum Inquiry, 1977.6.229-235.
8. Journal of Curriculum Studies, (1980)
9. Joyce & Weil, M (1980) Models of Teaching (II Edn.) Englewood Cliffs, N.J.Prentice-Hall
10. Kerr.J.K. (Ed) (1968), Changing the Curriculum London University of London Press
11. National Institute of Education Curriculum Task Force (1976) Current Issues, Problems and concerns in Curriculum Development Washington, D.C. The Institute (ERIC Document Reproduction Services No.Ed.124530).
12. Reid.W.A. (1978) Thinking about the Curriculum: The nature and treatment of curriculum problems. Boston: Routledge & Kegan Palul.
13. Saylor.J.G.Alexander.W.M. & Lewis, A.J. (1981) Curriculum Planning for better teaching and learning (3<sup>rd</sup> Ed.) New York, Dolt , Rinehart & Winston.
14. Schaffarak.J. & Sykes.G.(Eds) (1979) Value Conflicts and Curriculum Issues, Lessons from Research and Experience, Berkeley, Calif: Mccutchar.
15. Schaffarzck.J. & Harupson, D.H. (Eds) (1975) Strategies for curriculum development, Berkeley, Calif: McCutchar.
16. Schwab.J.J. (1978) The Practical: Translation into Curriculum, Westbury & N.J. Wilkins in (Eds) Science, Curriculum and Liberal Education, Selected Essays. Chicagao; University of Chicago Press.
17. Spears, Harold (1955) The Teacher and Curriculum Planning, (3<sup>rd</sup> Edn.), New York, Prentice Hall.Inc

**ED214 TEACHING COMPETENCY I (PRACTICAL)**  
**Credit : 0:0:2** **Marks 50 + 50**

**ED215 TEACHING COMPETENCY II (PRACTICAL)**  
**Credit : 0:0:2** **Marks 50 + 50**

**ED216 CONSTRUCTION OF TESTS (RECORD)**  
**Credit : 0:0:2** **Marks 50 + 50**

**ED217 MICRO TEACHING (RECORD)**  
**Credit : 0:0:2** **Marks 50 + 50**

**ED218 PSYCHOLOGY PRACTICALS (RECORD)**  
**Credit : 0:0:2** **Marks 50 + 50**

**ED219 CASE STUDY (RECORD)**  
**Credit : 0:0:2** **Marks 50 + 50**

**ED220 SCHOOL SURVEY (RECORD)**  
**Credit : 0:0:2** **Marks 50 + 50**

**ED221 PHYSICAL EDUCATION (RECORD)**  
**Credit : 0:0:2** **Marks 50 + 50**

**ED222 COMMUNITY SERVICES (RECORD)**  
**Credit : 0:0:2** **Marks 50 + 50**

**ED223 CAMP ACTIVITIES (RECORD)**  
**Credit : 0:0:2** **Marks 50 + 50**



## ED224 EDUCATIONAL GUIDANCE AND COUNSELLING

**Credit : 4:0:0**

**Marks : 40+60**

### **Objectives:**

At the end of the course the student teacher will be able to

- 1) Recognize the meaning, nature and need of Guidance services and Counseling in schools.
- 2) Acquire the necessary knowledge about the Guidance services, qualities of the counselor and his functional competencies.
- 3) Describe the different evaluative techniques to collect information about the individuals for effective guidance.
- 4) Differentiate guidance and counseling and explain the professional preparation of a counselor.
- 5) Interpret the values of modern trends in guidance movement.

### **Unit I. Guidance: Conceptual Aspects:**

Aim of guidance – Need for guidance – Meaning and Definition of guidance – Relation to dedication – Relation to discipline – Modern trends in guidance – Vocational, guidance, Educational guidance, Personal guidance, child guidance clinics, Specific areas of guidance.

### **Unit II. Guidance strategies: The counseling Techniques:**

Meaning of counselor – Conditions essential for counseling – Types of counseling – client centered, Directive, contrast and comparison – Group guidance and group counseling – Guidance in groups, group counseling, case conference procedures, multiple counseling.

### **Unit III. Individual's Evaluation for Effective Guidance:**

The concept of Evaluation – Functions of Evaluation and Evaluation Approaches – Informal study Approaches – Observation, Anecdotal records, Autobiographical Sketches, Sociograms and teacher- pupil interviews – Measurement of general and special abilities – Intelligence, Differential aptitude and achievement test – Evaluation of personality – Measurement of personality traits, Projective technique and situational tests – The school testing programme – Individual testing, group testing, construction of case history – Cumulative Records.

### **Unit IV. Counselling Process:**

Preparation for counseling – Counselling process – Counselling Interactions – Variables affecting counseling process – Counselling interview – Interview technique in counseling Counselor – Counseee relationship – Degree of lead, Silence, Relationship techniques, sharing of experience and resistance.

### **Unit V. Status of Guidance Movement in India:**

\Counselling Movement in modern times – Guidance Movement after Independence – Role of Government of India and Universities – Present Status of Counselling.

## **Practical Work: Case study of a problem student**

### **Suggested References:**

1. Shrivastava, K.K (2004), Principles of Guidance and Counselling 2<sup>nd</sup> Ed. New Delhi: Kanishka Publishers.
2. Narayana Rao, S (1991), Counselling and Guidance : Tata MC Graw Hill Publishing Company Limited.
3. Kochhar, S.K (1984), Educational and Vocational Guidance in Secondary Schools New Delhi : Sterling Publisher.
4. Bernad, H.W and Fullmer, D.F (1977), Principles of Guidance 2<sup>nd</sup> Ed. New York: Crowell.
5. Bhargava, M (1982), Modern Psychological Testing and Measurement Agra. H.P Bhargava Book Publishers.
6. Bhatnagar, Asha and Gupta, Nirmala. (1999), Guidance and Counselling Vol. I and II. New Delhi, Vikas publishing House (P) Ltd.
7. Myrick, R.D. (1993) Developmental Guidance and Counselling : A Practical Approach 92<sup>nd</sup> Ed ) Mineapoils, M.N. Educational Media Corp.
8. Ohlen, Merle M. (1974) Guidance Services in the Modern School. 2<sup>nd</sup> Ed. New York: Harcourt Brace Jovanovich, Inc.
9. Pasricha, Prem (1976) Guidance and Counselling in Education. New Delhi, NCERT.

## **ED225 EDUCATIONAL MANAGEMENT**

**Credit : 4:0:0**

**Marks : 40+60**

### **Objective:**

The Student Teacher:

- (i) Acquires knowledge of the terms and concepts needs in Educational Management.
- (ii) Understands the principles, functions and organization of Educational management.
- (iii) Applies the knowledge in analyzing the roles and supervision method of the present heads of the educational institutions
- (iv) Develops skill in preparing document for effective educational administration.
- (v) Develops interest in supervision and effective control of educational institutions
- (vi) Develops a desirable positive attitude towards the implementation of educational management

### **Course Content:**

#### **Unit 1**

Management – Administration - Meaning, definitions and difference - Functions of management - Educational management - Meaning functions. Theories of management - Principles of good management - Developmental and maintenance

## **Unit 2**

Management –Leadership –Styles-Role of Head of the Educational institution in management - Educational Supervision –Meaning –Need-Types aims-Difference between Supervision and inspection-Methods of Supervision.

## **Unit 3**

Roles of Teachers - Heads of the institution - inspectors of Schools - DEOs and CEOs on Educational Management - Role of State and Central Government - UGC, NCERT, SCERT on Educational Administration.

## **Unit 4**

Management of Curricular and Co-Curricular activities- School finance –Planning - School – Community partnership.

## **Unit 5**

Issues in Educational Management – centralization and decentralization autonomy and responsibilities - academic freedom - students participation in administration - self financing and aided institutions – Total Quality Management (TQM)

### **Practical Works**

1. Preparation of class timetable and master timetable.
2. Preparation of Annual plan for a school.
3. Visit a school and prepare a report based on school office records

### **Books for Reference:**

1. Cannobell, Coorbally and Ramasayer , Introduction to Educational Administration, Boson Allan and Bacon Inc
2. Education Commission Report /1964-66
3. Ghosh, Prasanta K., Office management, Sultan Chand Publisher
4. Haggett Albert , Practical School Administration II Linois, Garrand Press
5. Kochar S.K, Successful Supervision and Inspection, New Delhi Sterling Publishers
6. Kocher S.K, Pivotal issues in Indian Education, New Delhi, Sterling publisher.
7. Kocher S.K, Secondary School Administration, New Delhi, Sterling publisher.
8. Mamoria, CB and Udai Pareck, Personnel management (Management of Human Resources) Banglore, Himalaya publishing house.
9. Mathur S.S, Educational Administration, New Delhi, Amide publisher.
10. Mrityunjoy Banerjee., Business Administration Principles and Techniques., London Asia publishing house
11. Mort Paul R, Principles of School Administration, McGrawHil, publishers.
12. Rai B.C, School Organization and management, Lucknow Prakshan Kendra publisher.
13. Safaya R.N, Development planning and Problems of Indian Education, Delhi, Dhanpat Rai & Sons.
14. Sindhu K.S , School Organization and Administration , Jalandhar City international Publishers.
15. William Stally .W, Educational Administration of Secondary Schools, Holf Rinehart publisher.

## ED226 EDUCATIONAL MEASUREMENT AND EVALUATION

Credit : 4:0:0

Marks : 40+60

### Objective:

The Student Teacher:

- (i) Acquires knowledge of the concepts and terms used in educational evaluation.
- (ii) Understands the types and procedure of educational evaluation.
- (iii) Applies the knowledge in construction and measurement of education outcomes.
- (iv) Develops skill in the construction of test and interpretation of test scores.
- (v) Develops interest in the educational evaluation.
- (vi) Develops a desirable positive attitude towards the study of educational evaluation.

### Course Content:

#### Unit I

Measurement - Evaluation – Meaning - Definition - Difference - Function of evaluation – Types of evaluation – formative, summative, criterion, referenced – Norm referenced.

#### Unit II

Objectives – Learning experiences and Evaluation Meaning and relationship – taxonomies of educational objectives.

#### Unit III

Testing procedure – Oral, written, performance – Measuring instruments - test, observation schedule, rating scales, check lists, cumulative records, anecdotal records, projective techniques – Achievement tests, aptitude test, attitude test, diagnostic test, prognostic test and their purposes.

#### Unit IV

Achievement test – Meaning – Types of test terms -objective type, short answer type and essay type – Characteristics of test – Objectivity, reliability and validity – Test construction procedures – Standardization.

#### Unit V

Interpretation of test results - Organization of data – Frequency distribution – Calculation of averages, mean, median and mode – derivations – Normal distribution – skewness, kurtosis – Graphical representation of data - Co-efficient of correlation.

### Practical Work.

1. Construct an achievement test for a chapter in your optional subject.
2. Draft a tool to measure the attitude of the student towards any concept.
3. Analyze a question paper from objectives point of view.

**Books for Reference:**

1. Anastasi, Anne, Psychological testing, London, the Macmillan company.
2. Adams, G. S, Measurement and Evaluation in education, Psychological of guidebook, New Delhi, Holt, Rinehart & winston.
3. Bhatia K.K , Measurement and Evaluation in Education, Jalundur, Prakash brothers.
4. Bean K.L , Construction of Educational and personal Tests, New York , McGraw Hill company.
5. Bloom Benjamin S , Taxonomy of Educational objectives, Hand book I New York, Longman green and Co.
6. Best John W, Research in Education, New Delhi, Prentice Hall of India.
7. Downie N.M, Fundamentals of measurement, New York, Oxford University press.
8. Ebel, Robert L, Measuring Educational Achievement, New Delhi, Prentice Hall India Pvt Ltd.
9. Karathwohl, Bloom ,Taxonomy of Educational objectives, hand book II The affective Domin, New York., Macmillan Company.
10. Gronlund Norman E , Measurement and Evaluation of Teaching, New York, Macmillan Company.
11. Muthumanickam. R , Educational objectives for Effective planning and teaching, Chidambaram, Cyberland publisher.
12. N.C.E.R.T, The Concept of Evaluation in Educational, New Delhi, N.C.E.R.T.
13. Ornstein, Allen C. and Francis P. Hunkins, Curriculum, Foundations, Principles and issues, New Jersey, Prentice Hall
14. Srivastava , H.S and J.P shourie, Instructional objectives of School Subjects, New Delhi, NCERT Publication.
15. Tucknan, Bruce W Evaluating instructional programs, Boston, Allyan and Bacon.

**ED227 ENVIRONMENTAL EDUCATION****Credit : 4:0:0****Marks : 40+60****COURSE OBJECTIVES**

The students – teachers:

1. To acquire the knowledge of Environmental Education and its need.
2. To understand the concept and importance of Environmental Education.
3. To provide the fundamentals of Environmental Education.
4. To develop a sense of awareness of different kinds of environmental pollution and problems.
5. To understand the causes of pollution.
6. To grasp different types of environmental crisis and their control.
7. To conserve the natural resources and bio-diversity.
8. To appreciate the guidelines formulated by various conferences and commissions.
9. To develop a sense of responsibility about the role of teachers in fostering the idea of learning to live in harmony with nature.

## **COURSE CONTENTS**

### **UNIT – I**

- Evolution of Environmental Education.
- Its definition, objectives and significance
- Nature of Environmental Education
- Need of Environmental Education

### **UNIT – II**

- Types of Environmental pollution: social pollution, Marine Pollution, Thermal pollution, nuclear pollution, etc.
- Causes and effects of pollution.
- Hazards due to human activity
- Green – house effect (Global warming) and environmental threat.

### **UNIT – III**

- Bio-diversity
- Conservation of natural resources
- Classification of resources
- Environmental Management and Sustainable Development.
- Green Bench
- Creating community awareness.

### **UNIT – IV**

- Environmental Movements in India
- International Conferences
- Environmental Protection Acts.
- Role of UNESCO
- Environmental Education and Mass Media Programmes.

### **UNIT – V**

- Salient features of Environmental awareness through Teaching – Learning Strategies
- Role of school in environmental conservation and sustainable development.
- Teacher’s role in promoting the Environmental Education.

### **FIELD WORK**

The student – teachers are expected to visit a local area and submit a Project Report of 500 – 1000 words on any one of the types of pollution.

### **REFERENCE BOOKS:**

1. Anil Kumar De and Arnab Kumar De, “**Environmental Education**”; New Age International Pvt. Ltd., Publishers, New Delhi, 2004.
2. Anil Kumar De and Arnab Kumar De, “**Environmental Studies**”, New Age International Pvt. Ltd., Publishers, New Delhi, 2001.
3. Kaayar, V.S., “**Environmental Concerns, Depleting Resources and Sustainable Development**”, Pointer Publishers, Jaipur, 1997.

4. Kumar, R., "**Environmental Pollution and Health Hazards in India**", Ashish Publishing House, New Delhi.
5. Kumarasamy, K., Alagappa Moses, A and Vasanthi, M., "**Environmental Studies, Publication Division**", Bharathidasan University, Trichy, 2004.
6. Mitra, A.K., "**Urban Environmental in Crisis**", New Age International Pvt. Ltd., Publishers, New Delhi, 2000.
7. N.C.E.R.T. "**Environmental Studies**": Teachers" Guide, 1980.
8. Panneenselvam A. and Mohana Ramakrishnan., "**Environmental Sciences Education**", Sterling Publishers Pvt. Ltd., New Delhi, 2003.
9. Saxena, A.R., "**Environmental Education**", Bhargava Book House, Agra.
10. Sharma, R.G. "**Environmental Education**", Metropolitan Book Co. Pvt. Ltd., New Delhi, 1986.
11. UNESCO – UNEP, "**International Environmental Education**", Programme, 1990.
12. World Commission on Environmental and Development  
Our Common Future, o.u.p., 1989.



## ADDITIONAL SUBJECTS

Code	Subject Name	Credit
ED201	Education in the National and International Perspectives	4:0:0
ED202	Psychopedagogical Approach to Education	4:0:0
ED203	Educational Reforms and Technology	4:0:0
ED204	Content cum Methodology of Teaching Mathematics - I	4:0:0
ED205	Content cum Methodology of Teaching Physical Science - I	4:0:0
ED206	Content cum Methodology of Teaching Biological Sciences - I	4:0:0
ED207	Content cum Methodology of Teaching Computer Education - I	4:0:0
ED208	Content cum Methodology of Teaching English - I	4:0:0
ED209	Content cum Methodology of Teaching Mathematics - II	4:0:0
ED210	Content cum Methodology of Teaching Physical Science - II	4:0:0
ED211	Content cum Methodology of Teaching Biological Sciences - II	4:0:0
ED212	Content cum Methodology of Teaching Computer Education - II	4:0:0
ED213	Content cum Methodology of Teaching English - II	4:0:0
ED214	Curriculum Design and Evaluation	3:0:0
ED215	Educational Guidance and Counseling	3:0:0
ED216	Educational Management	3:0:0
ED217	Educational Measurement and Evaluation	3:0:0
ED218	Environmental Education	3:0:0
ED219	Teaching Competency - I (Practical)	0:0:2
ED220	Teaching Competency - II (Practical)	0:0:2
ED221	Construction of Tests (Record)	0:0:2
ED222	Micro Teaching (Record)	0:0:2
ED223	Psychology Practical (Record)	0:0:2
ED224	Case Study & Action Research (Record)	0:0:2
ED225	School Survey	0:0:2
ED226	Physical Education (Record)	0:0:2
ED227	Community Service (SUPW and Arts & Craft) - Record	0:0:2
ED228	Camp Activities & Educational Tour (Record)	0:0:2
ED229	Practical Record & Preparation of Instructional Aids	0:0:2
ED230	Educational Technology Lab (Record)	0:0:2

### ED201 EDUCATION IN THE NATIONAL AND INTERNATIONAL PERSPECTIVES

**Credit:4:0:0**

**Marks: 40+60**

#### **Objectives**

To enable the teacher trainee to understand:

1. The relationship between philosophical systems and education.
2. Role of education in social change.
3. Role of education in human resource development.
4. Educational policies and programmes in India.

5. Develop vision for futuristic programmes in education.
6. Develop international understanding.

## **Course content**

### **Unit-I : Education**

What is education? Definitions and Aims of Education. Types of Education-Formal, Informal, Non-formal Education. Education at different levels-Preprimary, Secondary and Higher Secondary education. Statutory boards of education – CBSE, ICSE, Anglo Indian, Matriculation and State Boards. Higher Education Sceneries. Universities - Open University, Deemed University. National Education bodies – NCTE, NAAC, NCERT, UGC.

### **Unit-II: Educational Implications of Schools of Thought**

Philosophy-Meaning-Schools of Philosophy. Idealism, Naturalism, Pragmatism, Jainism, Buddhism. Philosophy of Rabindranath Tagore, Swami Vivekananda, Mahatma Gandhi, Sri Aurobindo Ghosh, Dr. S. Radhakrishnan.

### **Unit-III : Emerging Concerns in Education**

Sociology, Social change, Education as an instrument of Social change, gender justice - Population Education - Ecological imbalance - Human Rights.- Quality Education - Value Oriented Education - Education for sustainable development.

### **Emerging Trends in Society**

Liberalisation - Globalisation - Privatisation - Consumerism - Mass Media - Role of Technology in social change, Emergence of the knowledge, society - Adaptive demands in society - Global village conception -Visions for Indian Education in the 21<sup>st</sup> Century.

### **Unit-IV : Status of Education in the Indian Constitution**

Universalisation of Education – Equality of Opportunities – Education and Fundamental Rights and Duties. Education for National Integration \_ Education for International Understanding - Critical Concerns of Higher Education – Quality Vs Quantity in Education – Wastage and Stagnation – Population Education, Social Evils. Adult Education.

### **Unit-V : Teacher Education**

Teacher Education – Meaning – Aims – Objectives. Role of Teachers in the emerging Indian Society – Accountability of Teachers – Competency based Teacher Education – Pre service Education – In-Service Teacher Education.

### **Text Books:**

1. Taneja V.R – (1973) Education Thought and Practice, sterling publications, sterling publications, New Delhi.
2. Aggarwal J.C. Philosophical and Sociological Foundations of Education.
3. Thankachan T.C Philosophy and Sociological bases of Education.

### **Reference Books:**

1. Saider.K.G. – Problems of Educational reconstruction in India, Asia publishing House, Bombay.
2. Shrinah. K.L – Education in Changing India, Asia publishing House, Madras.
3. Tyogi.P.N. (1991) – Education for All – A Graphic Presentation New Delhi, NIEPA.
4. Ruhela S.P.(1969) – Social Determinants of Education, Mc Grow Hill, New York.
5. Brubacher John.S (1950) Modern Philosophies of Education, Mc Grow Hill, New York.
6. Mathur DSA (1966) Sociological – approach to Indian Education Vinod Penatak Mandes, Agra.
7. Gandhi M.K. (1951) Basic Education, Nanajeevan Publishing House, Ahamedabad.
8. Mukherji.Dr. S.N. – Education in India, Today and Tomorrow, Acharya Book Depot, Bawda.
9. Mohanty (1982) Indian Education in the Emerging Indian Society, Sterling Publishers, New Delhi.
10. Lakshmi.S (1989) – Challenges in Indian Education, Sterling Publishers Pvt. Ltd., New Delhi.

### **ED202 PSYCHOPEDAGOGICAL APPROACH TO EDUCATION**

**Credit : 4:0:0**

**Marks :40+60**

#### **Objectives**

At the end of the course, the pre service teacher will be able to

1. Realize the significance of psychological basis in education
2. Explore the pivots of psychological basis in education learning experience, learning environment, learning process and the teacher, in detail.
3. Acquire sufficient knowledge and understanding about the nature and scope of Psycho pedagogical approach to education.
4. Apply the principles of psycho pedagogical approach in classroom situation and education.
5. Equip relevantly to function as an efficient teacher.

#### **Unit- I : Introduction to Psycho Pedagogical Approach**

School, Methods, Branches of Psychology and Nature and Scope of Educational Psychology, Significance of Psycho pedagogical approach.

#### **Unit-II: Human Growth and Development with Cognitive Development.**

General principles of growth and development – Dimensions of Development – Phases of Development – Childhood and Adolescence- Developmental – Tasks and Education. Distinction between growth and development – Maturation and Development – Nature and nurture.

Cognitive process – Attention – Factors relating to attention – Span of Attention – Distraction and inattention - Sensation and Perception – Principles of perception – Imagery – Concepts – Types, Concept Formation – Bruner’s Theory – Concepts Maps – Piaget’s shares of Cognitive Development – Reasoning and Problem solving. Implications for the teacher.

#### **Unit III : Learning and Motivation**

Nature and importance of Learning – Types of Learning – Theories of Learning – Thorndike, Pavlov, Skinner, Kohler and Gagne – Learning Curve – Transfer of Learning, Facilitating Transfer – Remembering and Forgetting – Curve of Forgetting – Individual Differences in Learning.

Motivation and Learning – Functions of Motives – Kinds of Motives – Hull's Drive Reduction, Maslow's Hierarchy of Needs, Achievement Motivation – Motivation in the classroom context – praise and blame, rewards and punishments – Feedback/Knowledge of Results – Level of Aspiration.

#### **Unit IV: Personality, Intelligence and Creativity**

Meaning and Definitions of Personality – Major determinants of personality – Theories of Personality – Psychoanalytic, Humanistic, Transpersonal, Assessment of Personality – Integrated personality.

Theories of Intelligence – Single, Two Factor and Multi Factor Theories – Guilford's Structure of the Intellect – Emotional Intelligence, Multiple Intelligence – Individual differences in distribution of Intelligence - Intelligence Tests and their uses.

Creativity – Relationship and difference between intelligence and creativity – Convergent and Divergent Thinking., Lateral Thinking – The Process of Creativity – The Gifted and their Identification – Promotion of the Gifted.

#### **Unit-V: Mental Health, Mental Hygiene & Guidance and Counseling**

Conflict and Frustration – Concept of Adjustment – Causes of Maladjustment – Symptom of Maladjustment, Defense Mechanisms - Problem Children. Juvenile Delinquency – Concepts of Mental Health and Mental Hygiene.

Definitions of Guidance and Counseling – Distinction between Guidance and Counseling, Need, Nature and Types – Educational, Vocational and personal – Identification of children with acute counseling needs – Counseling techniques – Individual and group techniques, Psychotherapy and psychoanalysis.

#### **PSYCHOLOGICAL EXPERIMENTS (any five of the following)**

1. Intelligence
2. Learning
3. Transfer of Training
4. Aptitude
5. Adjustment
6. Concept Formation
7. Level of Aspiration
8. Interest
9. Personality Types
10. Attention

11. Perception
12. Motor Skills
13. Creativity
14. Achievement Motivation

**Text Books:**

1. Munn N.I., (1997) Introduction to Psychology, Delhi.
2. Nagarajan K. Selvakumar. S.D., Mani, S and Devaraj.G.(1999): Psychology ; Chennai; Ram Publishers.
3. Parr, John and Adiseshiah, W.T.V (1997): Experimental Psychology, Madras allied Publishers.
4. Pasricha. Prem (1976): Guidance and Counselling in Indian Education, New Delhi; NCERT.
5. Petri, H.L (1995); Motivation: Theory and Research (2<sup>nd</sup> edn) Belmont Ca: Wadsworth.
6. Santhanam, S. (1993) : Human Motivation, New York: Holt, Rinehart & Winston.
7. J.C.Aggarwal, The Essentials of Educational Psychology.

**Reference Books:**

1. Hall C.S and Lindzey, G(1998) ; Theories of Personality (3<sup>rd</sup> den) New York; John wiley.
2. Hilgard E.F., Ernest Richard C. Atkinson and Rita (1971) Introduction to Psychology (5<sup>th</sup> edn.) New York : Harcourt Brace.
3. Hurlock . E.B(1998) : Child Psychology. Tokyo: McGraw Hill.
4. Maslow A.H. (1990) Motivation and Personality (2<sup>nd</sup> edn.) New York : Harper & Row.
5. Morgan and King (1976) ; Introduction to Psychology, Delhi: Tata Megraw Hill
6. Adams, J.A. (1992): Learning and Memory: An Introduction, Home wood, Illinois: Dorsey Press.
7. Adams, H.E. (1992); Psychology of Adjustments, New York : Ronald.
8. Bhatnagar, Asha and Gupta, Nirmala (1999) : Guidance and Counseling. Vol.1 & II, New Delhi: Vikas Publishing House.
9. Boaz., G.D (1968) : General Psychology; Institute of Psychological Service, Madras.
10. Broady E.B and Body, N.(1996); Intelligence; Nature, Determinants and Consequence, New York; Academic Press
11. Butcher H.J., (1993) Human Intelligence: Its Nature and Assessment, New York.
12. Butcher and Javils N (1993) Objective personality Assessment, New York: Academic Press.
13. Coleman, Daniel (1998), Working with Emotional Intelligence, New York Bantan Books.
14. Coleman Daniel (1995) Emotional Intelligence, New York Bantan Books
15. Cronback. I, J., (1990) : Essentials of Psychology, New York: Harper and Row.
16. Crow and Crow (1993) : Educational Psychology New Delhi; Eurasia Publishing House.
17. DeCeco, Joghna P and Crawford (1977); The Psychology of Learning and Instruction (2<sup>nd</sup> ed.). New Delhi: Prentice Hall of India.

18. Debono., E (1967): New Think : The Use of lateral thinking in the generation of New ideas, New; Basic Books.
19. Eysenck H.J (1997); Dimensions of Personality, London: Kegan Paul
20. Garden H. (1993) ; Multiple Intelligence : Theory into Practice, New York

## **ED203 EDUCATIONAL REFORMS AND TECHNOLOGY**

**Credit:4:0:0**

**Marks: 40+60**

### **Objectives:**

At the end of the course the student teacher will have an understanding of

1. The meaning of reform and the impact of reform.
2. The role of the nation in bringing out reforms in the field of education.
3. Importance of communication techniques in education.
4. The outcomes of the educational reforms.
5. The meaning and scope of educational technology.
6. Recent trends in imparting education due to technological development.

### **Unit I : Educational Reforms**

Meaning- Need for Reforms – Relations between education and social reforms – Education in Ancient India- Vedic, Brahmanic, Buddhist, Muslim Education. Education under British Rule. The role of the Nation in bringing out educational reforms – education in concurrent list – Constitutional commitment – Mudaliar commission – Kothari Commission – National Education Policy (1986) – Minimum levels of education – Women’s education – Special education – Adult education and Vocational education.

### **Unit II : Educational Reform out comes**

Community schools, Neighbourhood schools, SMART Schools, school complex- Distance education, open learning and virtual classes- Navodhaya Vidhyalaya – Kendra Vidhyalaya, Sainik Schools, Defence Academies, De Schooling, and Floating University.

### **Unit III: Educational Technology**

Meaning – Definition – Need and Scope of Educational Technology as a complex and comprehensive approach – Educational Hardware and Software – Role of a teacher in educational technology.

### **Unit IV: Recent trends in Educational Technology**

Self instructional methods – Personalised system in instruction (PSI) – Programmed Learning – Language Laboratory –Computers in Education - Computer Assisted Instruction(CAI) –Multimedia Approach – Internet - Educational Satellites – Tele and Video conferencing –e-learning, Cc Tv

### **Unit V: Techniques of Communication**

Meaning – Types – Elements – Models - Networks – Roles – Barriers of Communication.



Role of Audio Visual Aids – Dale’s Cone of Experience –Radio and Television lessons, Charts, Models, Flash Cards, Pictures, Flannel, Magnetic and Bulletin Boards exhibits,OHP - Slide Projector - Film Strip Projector - Role of Power Point Presentations in Education. Flander’s classroom interaction analysis.

**Text Books:**

1. Taneja V.R – (1973) Education Thought and Practice, sterling publications, sterling publications, New Delhi.
2. Aggarwal J.C. Philosophical and Sociological Foundations of Education.
3. Sampath.K.Panneerselvam.A and Santhanam.S. (1984) Introduction to Educational Technology, Sterling Publishers Pvt. Ltd., New Delhi.
4. Kumar K.L.(2004) Educational Technology, New Age International Publishers, New Delhi.

**Reference Books:**

1. Dewey (1966) Democracy and education, New York: The free press.
2. Gandhi. M.K. (1952) Basic Education, Navajivan Publications, Ahamedabad.
3. Gandhi. M.K. (1952) The Problem of Education, Navajivan Publications, Ahamedabad
4. Neill. A.S. (1960) A Radical Approach to Child- Rearing, Summer hill, New York.
5. Rogers.E. M(1983) Diffusion of Innovations, The Free Press, New York.
6. Sampath.K.Panneerselvam.A and Santhanam.S. (1984) Introduction to educational technology, Sterling Publishers Pvt. Ltd., New Delhi.
7. Selinger.M and Pearson.J (1999) Telematics and Education, New York
8. Shukla.P.D (1976) Towards the New Pattern of Education in India, Sterling Publisher, New Delhi.

**ED204 Content cum Methodology of Teaching Mathematics – I**

**Credit: 4:0:0:**

**Marks: 40 + 60**

**Objectives:** To enable the student-teachers to

1. Acquire the knowledge and the process of teaching mathematics.
2. Understand the process of curriculum construction in mathematics
3. Understand the process of evaluation, test, measurement and interpretation of results.

**Unit I:**

- 1.1 Mathematics – Meaning, Nature and values
- 1.2 Historical development of mathematics – contribution of mathematicians – Euclid, Pythagoras, Bertrand Russell, Aryabhata, Bhaskaracharya, Brahmagupta and Srinivasa Ramanujan
- 1.3 Aims and objectives of teaching mathematics – Instructional objectives – General and specific objectives
- 1.4 Planning – meaning, importance and purpose – Year plan, unit plan, lesson plan

**Unit II:**



- 2.1 Methods of teaching mathematics – inductive, deductive, analytic, synthetic, Laboratory, heuristic, problem solving, play way and project method.
- 2.2 Techniques of teaching mathematics – oral, written, drill, assignment, supervised Study.
- 2.3 Individualized instructional techniques – personalized system of instruction, Programmed learning and computer assisted instruction.
- 2.4 teaching aids – preparation and use of teaching aids.

**Unit III:**

- 3.1 Concept of micro teaching – meaning, phases, cycle, importance, micro teaching Skills
- 3.2 Practicing microteaching skills – skill of stimulus variation, reinforcement, probing Question, skill of blackboard usage and explanation.

**Unit IV:**

- 4.1 Curriculum in mathematics – meaning, principles of curriculum construction in mathematics – development of a curriculum in mathematics.
- 4.2 Mathematics text book – characteristics of text book – appropriate use of text book – Mathematics text book evaluation

**Unit V:**

- 5.1 Evaluation – meaning, principles and types of evaluation
- 5.2 Test and Measurement – meaning, types of tests, characteristics of tests, Construction of tests – blue print, score procedure
- 5.3 Analysis and interpretation of test results – measures of central tendency, standard deviation and rank correlation.

**Text Books:**

1. Packiam S. (1987) Teaching of Modern Mathematics and Test and Measurement Gandhimathi Publication, Tuticorin.
2. Aggarwal S.M. (2001) A course in Teaching of Modern Mathematic.
3. Dr. Anice James (2005) Teaching of Mathematics, Nerkamal Publications Pvt. Ltd.,
4. Kulbir Singh Sidhu (2005) The teaching of Mathematics, sterling Publishing Pvt. Ltd., New Delhi.

**Reference Books:**

1. Charles H. Butter (1960) The Teaching of Secondary Mathematics, McGraw Hill Book Company, New York.
2. Kennelli J. Travers et al., (1977) Mathematics Teaching, Happer and Row Publishers, New York.
3. Abbot, Edwin A. Flatland (1963) A Romance of many Dimensions, Barnes and Noble, New York.
4. James T. Glover (2001) Vedic Mathematic for schools, Mobilal Banarsidars Publishers Pvt. Ltd., Delhi.
5. Marforam D.T.E (1974) Teaching Mathematics, Hernemann Educational Books Limited, London..

6. Chitragada Singh R.P. Rohatgi (2005) Dominant publishers and distributors Delhi.
7. S.K. Mangal (2005), Teaching of Mathematics, Tandon Publications, Ludhiana.

## ED205 CONTENT CUM METHODOLOGY OF TEACHING PHYSICAL SCIENCE - I

**Credit: 4:0:0**

**Marks: 40+60**

### **Objectives:**

At the end of the course the pre- service teacher will be able to

1. Realize the aims and objectives of teaching physical science.
2. Become aware of different microteaching skills and methods used in the teaching of physical science.
3. Identify the principles of curriculum construction.
4. Construct and standardize achievement tests in physical science.
5. Emphasize criteria in selecting a good science textbook.
6. Organize and maintain physical science laboratory, plan club activities.
7. Ascertain the special qualities required of physical science teacher,
8. Become complete in following relevant evaluation techniques.

### **Unit I:**

Nature and scope of Physical Science – Nature of Science – (Product and Process) – A body of Knowledge – Areas of knowledge related to Physics and Chemistry – inter disciplinary approach (correlation of physical science with other subjects).

Aims and Objectives of Teaching Physical Science Bloom's Taxonomy of Educational objectives – Aims and objectives of teaching physical science at different levels – primary, secondary, Higher Secondary, Specification.

### **Unit II:**

Curriculum Construction in Physical Science – Principles of Curriculum Construction Criteria of selection of content matter – Organization of content matter Critical evaluation of Tamil Nadu Secondary School Science Curriculum. Curriculum improvement projects in India (NCERT) and Abroad (Chemistry PSSC, CBA, Nuffield.)

Micro teaching and relevant skills – Skill of Introduction – Skill of Explaining – Skill of Stimulus Variation – Skill of reinforcement – Skill of Questioning – Skill of using Blackboard – Skill of Demonstration – Achieving Closure – Need for Link lessons in Micro Teaching Programme – Macro Teaching.

### **Unit III:**

Methods of Teaching Physical Science – Scientific method – induction –deduction method, Lecturer method – Lecture cum demonstration method – Individual Practical work as a method – Analytic and Synthetic method, Heuristic approach-Project method – Historical and Biographical approaches. Dalton Plan.

Modern methods of Teaching Physical Science – Group discussion, Panel discussion, simulation workshop, seminar, symposium, team teaching, supervising study

Tests and its types, Diagnostic and Prognostic and achievement tests – Criterion and norm referenced tests – Evaluation – Evaluating outcomes of science teaching – Principles of test construction. Blue print, Scoring key, Marking scheme, Item analysis, Reliability, Validity, Standardizing test.

#### **Unit IV:**

Lesson Planning – Planning for teaching – developing year plans, unit plans, lesson plans – Principles of Lesson Planning – Lesson Plans – their importance – Herbartian steps – Their merits and limitations. Teaching and teaching aids – Evaluation, recapitulation and assignment, Unit plan, Year plan

Physical Science Laboratory – Structure design – Organization and maintenance of Science Laboratory – Maintenance of Registers – Storage of Chemicals – Organization of Practical work. Improvisation of Apparatus  
Accidents and first Aids

#### **Unit V:**

Co-Curricular Activities – Organization of Science clubs- Science exhibitions and fairs- fieldtrips and excursions.

Science Teacher – Academic and Professional growth – Special qualities – In – Servicing training.

Classroom climate, authoritative, Democratic and Laissez faire pattern.

Qualities of a good Science textbook use of text books inside and outside the classroom. Criteria for evaluation of science textbook.

Science Libraries values of School Science Library.

Knowledge of all the concepts in Physics and Chemistry up to X Standard.

#### **Practical Work:**

1. Construction and use of achievement test. Analysis and interpretation of test scores.
2. Making 10 charts and 3 improvised apparatus (1 Working model and 2 Still models).
3. Practicing 5 micro lessons with 5 different skills
4. Conducting an investigatory project on any science topics and presenting the report or
5. Report of a place of scientific importance/factory visit.
6. Participating in at least two seminars (in B.Ed., topics) Presenting two papers.
7. Presenting on demonstration to the peers.
8. Making 2 slides.
9. Preparation of a Programme of 20 frames on any topic from Physics or Chemistry topic.
10. Preparing a Science album with Internet materials of scientific issue and website reports.

#### **Text Books:**

1. Dr.T.K. Mathew, Dr. T.M. Mollykutty, Science Education Theoretical Bases of Teaching and Pedagogic Analysis May 2006.
2. Dr. Sivarajan , Prof. A. Faziluddin, Science Education Methodology of Teaching and Pedagogic Analysis.

**Reference Books:**

1. Anderson, R.D et al, 1992, issues of Curriculum Reform in Science, Mathematics and Higher order Thinking Across the disciplines. The Curriculum Reform Project, University of Colorado, U.S.A.
2. Carin & Robert Sund, 1989. Teaching Modern Science (Fifth Edition) Merrill Publishing Co., U.S.A.
3. Edgar Dale, Audio-Visual Methods in Teaching. Revised Edition. The dry den press, New York.
4. Garrett statistics in psychology and education vakils feffer and Simons Ltd., Bombay 1979.
5. Gupta S.K., Teaching of Physical Science in Secondary Schools Sterling's Publication (Pvt) Limited, 1985.
6. Heiss. Obourn & Hoffman, Modern Science in Science and Technology Education, Vol. VI UNESCO, Paris.

**ED206 CONTENT CUM METHODOLOGY OF TEACHING BIOLOGICAL SCIENCES – I****Credit: 4:0:0****Marks: 40+60****Objectives:** The student Teacher understands

1. The basic principles of the Biological Science education at the Secondary level.
2. Competency in teaching the subject in terms of methods, skills and techniques.
3. Understands traditional method of teaching and contrasts them with modern trends.
4. Importance of development of skills.
5. The use of aids and all other types of instructional materials.
6. Appreciates the modern trends in teaching biology.
7. Become complete in following relevant evaluation techniques.

**Unit I:**

- 1.1 Biology Syllabus prescribed by Tamil Nadu Govt. for students of Std. VI, VII, VIII, IX and X.
- 1.2 Its relationship to other sciences and the type of content it should have.
- 1.3 Text Book
  - Characteristics of Good Text Book.
  - Use of Biology Text Book.
- 1.4 Resource Unit
- 1.5 Hand book for teachers and Workbook for pupils.
- 1.6 Reference Books and Supplementary Readers.

**Unit II:**

- 2.1 Methods and approaches of Teaching Biological Science
- 2.2 Lecture method, Demonstration method, Heuristic method, Project method, Problem solving Method, Dalton plan.
- 2.3 Programmed learning: Linear & Branching.

- 2.4 Team Teaching.
- 2.5 Micro Teaching – various skills.
- 2.6 Small Group Techniques – Buzz session & Brain storming.
- 2.7 Process Vs Product approach in Biological Science Teaching.

**Unit III:**

- 3.1 Taxonomy of educational objectives.
- 3.2 Teaching Biology with reference to Bloom's Taxonomy.
- 3.3 Objective Based instruction.
- 3.4 Instructional objectives.
- 3.5 Specifications.

**Unit IV:**

- 4.1 Planning of Instruction.
- 4.2 Importance of planning.
- 4.3 Year plan.
- 4.4 Unit plan.
- 4.5 Lesson plan.

**Unit-V**

- 5.1 Evaluation – Purpose, Principles, Kinds.
- 5.2 Achievement Test.
- 5.3 Essay Type Question – Merits, Demerits.
- 5.4 Short Answer Question.
- 5.5 Objective Type Question.
- 5.6 Blue print.
- 5.7 Scoring key, Marking scheme.
- 5.8 Standardisation of achievement test.

**Practical:**

1. Making charts, improvised apparatus and models.
2. Practice of a minimum of 2 skills under microteaching (Proper records to be maintained)
3. Preparation of 3 slides and 3 transparency sheets.
4. Planning and conducting any four practical classes in Biology and maintaining a record of practical work .
5. Preparation of a unit test for a unit in Biology.
6. Collecting and preserving biological specimens and herbarium sheet.
7. Power point presentation (5 frames)

**Text Books:**

1. Dr. T.K. Mathew, Dr. T.M. Mollykutty, Science Education Theoretical Bases of Teaching and Pedagogic Analysis May 2006.
2. Dr. Sivarajan , Prof. A.Faziluddin ,Science Education Methodology of Teaching and Pedagogic Analysis.

**Reference Books:**

1. Buffalo Neal and Thronebery, J.B., Principles of Biology Teaching, Prentice-Hall of India Limited, 2<sup>nd</sup> Edition, New Delhi, 1972.
2. Chauhan S.S., Innovation in teaching learning process, Vikas publishing House, New Delhi, 1985.
3. Garrett, H.E. Statistics in Psychology and Education Vakils Feffer and Simons Ltd., Bombay 1979.
4. Green, T.L, The Teaching of Biology in Tropical Secondary School, Oxford University Press, 1965.
5. Heiss E.D., Obown. S. and Hoftman C.W., Modern Science Teaching, Macmillan Company Press, New York, 1961.
6. Jean Bremmen, Teaching of Biology, Macmillan, St. Martin's Press, New York.
7. John S. Richardson, Science Teaching in Secondary Schools, Prentice Hall, 1962.
8. Joseph, J. Schwab T., Teaching of Science, Harvard University Press 1964.
9. Miller and Blaydes, Methods and Materials for Teaching Biological Science, McGraw Hill, 1962.
10. Nair, C.P.S., Teaching Science in our Schools, S. Chand and Co. (Pvt.) Limited 1971.

**ED207 CONTENT CUM METHODOLOGY OF TEACHING  
COMPUTER EDUCATION - I**

**Credit: 4:0:0**

**Marks: 40+60**

**Objectives:** To enable the Teachers:

1. To acquire the knowledge of computer science
2. To understand computer, its kinds, its parts and uses in secondary and higher secondary schools (Hardware and Software)
3. To understand the general and specific skills in teaching computer science.
4. To acquire the knowledge of lesson Plan Writing and Micro-Teaching skills.
5. To familiarize with the various methods of teaching computer science.
6. To acquire the knowledge of tests, Blue print, Evaluation and remedial measure.
7. To develop skill in Office Automation: MS Office 2000, MS Word 2000 and MS Excel 2000.

**Unit I : Nature and Scope**

Brief history of development of computers - Nature and scope of computer science - Types of computers - Uses of computers in school teaching - Computer Hardware, its parts and importance of computer - Computer Software, its importance and uses - The computer generations - Printers : Laser and Jet Printers.

**Unit II : Aims, Objectives, Microteaching And Lesson Planning**

General and Specific instructional objectives of teaching computer science, Bloom's Taxonomy. Herbartian steps and Lesson Plan Writing at Primary, Secondary and Higher Secondary levels. Micro-teaching skills : Explaining, Reinforcement, Probing- questions.

**Unit III : Methods**

Inductive and Deductive methods of Teaching Computer Science Heuristic method. Laboratory method. Programming Learning : linear Programming and Branching

Programming. Computer Assisted Instructions (CAI) and Computer Managed Learning (CAL)

#### **Unit IV : Applications**

MS Office Introduction, Editing in Office, Selecting, Moving, Copying, working with files, fonts and font styles, editing document texts. MS Word 2000 Introduction, typing letters and editing, printing. Using spell check and Thesaurus. Designing a cover page and word art. MS Excel Entering and changing information and formula, Admission detail of students in various courses. Printing graphs and charts for the given data.

#### **Unit V : Curriculum and Evaluation**

Principles of curriculum development – criteria of selection of content and principles of organizing the selected content. The concept of evaluation – evaluation for achievement diagnosis and prediction – various kind of test – principles of construction and administration of an achievement test characteristic of a good test – Blue print – On-line examination.

#### **Text Books:**

1. Siddigi, N.N. and Siddigi,M.N., Teaching of science Today and Tomorrow, Doaba House, New Delhi-1998.
2. Stanley Progrow, Education in the computer age, Sage Publications, India – 1983.

#### **Reference Books:**

1. Chauhan, S.S., Innovations in teaching Learning Process, Vikas, Publishing house, New Delhi-1985.
2. Gear, C.W., Computer Organization and programming, McGraw Hill Publishing Company – 1986.
3. GregPerry, Teach yourself Windows in 24 Hours, Techmedia Publishing company – 1998.
4. Gorden, B.Davis, introduction to computers, McGrew-Hill Publishing company-1982.
5. Passi, B.K., Becoming a better Teacher and Micro Teaching approaches, Sahitya Mundralaya, Ahamadabad, 1976.
6. Rajaraman, V. Fundamentals of computers, Prentice Hall of India Pvt. Ltd., New Delhi-1996.
7. Stephen L.Nelson, Office 2000. The Complete Reference, Tata McGraw Hill Publishing Co.Ltd.
8. Taxali,R.K., PC Software for windows made simple, Tata McGraw Hill India Ltd., New Delhi - 1998.



## ED208 CONTENT CUM METHODOLOGY OF TEACHING ENGLISH – I

Credit : 4:0:0

Marks : 40+60

### Objectives:

- a) To be familiar with the English sounds
- b) To improve the spoken ability in English
- c) To develop the skill of reading and writing ability
- d) To acquire a working knowledge of various aspects of Modern English Grammar and usage at the Higher Secondary level
- e) To develop the reference skills
- f) To familiarize with the fundamentals of Linguistics

### Unit I : Spoken English – Phonetics

Definition of Language

Meaning and scope of linguistics

Varieties of language: Dialect, register, slang, etc.

Different organs of speech and their functions

The individual sounds consonants – A phonemic contrast – Constant clusters

The individual sounds vowels and Diphthongs – A phonemic contrast

The concepts of the Phoneme and Allophone – the syllabic structure

Stress – Word stress and sentence stress (strong forms and weak forms) – Intonation – rhythm.

### Unit II : Spoken English – Fluency

Use of conventional Formulae. e.g. greeting, apology, invitation, thanking, etc.

Reading aloud prose passages and poems with clarity

Describing and interpreting pictures, tables, graphs, maps, etc.

Dialogues and role play

Seminar, symposium and panel discussion

Narrating incidents – reporting the events

### Unit III : Skill of Reading and Writing

Intensive reading: detailed texts

Reading for surface meaning, implied meaning and evaluation

Skimming and scanning for comprehension

Extensive reading: Novels, short stories and simple books written for laymen

Writing: Paragraphs, essays, letters, appreciation

Note taking, note making, developing hints and summary writing

### Unit IV : Modern English Grammar and usage

Concord

The modal verbs

The noun phrase : MHQ (Modifier, Headword, Qualifier) and verb phrase

Articles and Prepositions

Basic sentence patterns

Relative clauses and a+b+r clauses  
Gerund – Infinite – participle  
Voice and reported speech  
Sentences: Simple, compound and complex  
Word formation: Affixation – conversion – compounding  
Error analysis and classification: Errors, causes and remedies

### **Unit V: Reference, Study and Teaching skills**

Micro and macro formats of lesson in English  
Practice in the use of dictionary, Thesaurus and Encyclopedia  
SQ3R  
Library: Bibliography and annotated bibliography cards – uses  
ELT through drama, newspaper, cartoon and multimedia  
Phonology, morphology, syntax and semantics

### **Practicum (1-7 items are compulsory)**

1. Power point presentation to teach any English lesson. (Prose, poetry, grammar, composition, non-detailed reader)
2. PLM/Audio cassette / Video cassette to teach any language item
3. Transparencies: 5 to 10
4. Slides: 4 to 8
5. Film strips
6. Blackboard sketches: Stick drawing
7. Preparation of an Album about England, English life, English literature and Commonwealth and African literature
8. Flash cards
9. Still models (if possible working models)
10. Project on ELT
11. Textbook analysis: VI, VII & VIII, IX & X, XI & XII Standard Textbooks
12. Creative writing: Precise writing, paraphrasing, dialogues in phonemic script, letter writing, and expansion of an idea.

### **Text Books:**

1. Sterne, S.S., 'Fundamental Concepts in Language Teaching', New York, Longman
2. Venkateswaran, S., 'Principles of Teaching English', Vikas Publishers Pvt. Ltd.
3. Verma, S.K. and N. Krishnasamy, 'Modern Linguistics', OUP, 2004
4. Widdowson, H.G., 'Teaching Language as Communication', OUP, 1979

### **Reference Books:**

1. Ahuja, G.C. and Pramila Ahuja, 'How to Increase Reading Speed', Sterling Publishers, 1994.
2. Brown, Gillian, 'Listening to Spoken English: Applied Linguistics and Language', Longman, 1977
3. Brunifit, E.J. and K. Johnson, 'The Communicative Approach to Language Teaching', OUP, 1979

4. David, E., 'Classroom Techniques – Foreign Languages and English as a Second Language', New York, Harcourt Brace, 1977
5. Els, Theo Van et al, 'Applied Linguistics and Learning and Teaching of Foreign Languages', Edmond Arnolds, 1984
6. Geoffrey, Bernard, 'Better Spoken English', McMillan & Co., London, 1969
7. Grellet, Françoise, 'Developing Reading Skills', CUP, 1986
8. Hornby, A.S., 'Guide to Patterns and Usage in English', OUP, 1976
9. Huddleston, Rodney, 'English Grammar: An Outline', CUP, 1996
10. Jean and David Giles, 'Think, Talk and Write', Longman, 1967
11. Johnson, K., 'Communicative Syllabus Design and Methodology', Oxford, Pergamon Press, 1983
12. Kohli, A.L., 'The Techniques of Teaching English', Dhanpat & Co. Sons, New Delhi.
13. Lawrence, M., 'Writing as a Thinking Process', New York, NCTE, 1975
14. McCarthy, Michael and Felicity O'Dell, 'English Vocabulary in Use', CUP, 1994
15. Nagaraj, Geetha, 'ELT: Approaches, Methods, Techniques', Orient Longman, 1996.
16. Richard, Jack, C., 'The Language Teaching Matrix', CUP
17. Sachdeva, M.S., 'A New Approach to Teaching of English in India', Prakash Brothers, Ludhiana, 1980
18. Seely, John, 'The Oxford Guide to Writing and Speaking', OUP, 1988

## **ED 209 CONTENT CUM METHODOLOGY OF TEACHING MATHEMATICS II**

**Credit 4:0:0**

**Marks:40+60**

**Objectives:** To enable the student teachers to

1. Understand the Psychology of teaching and learning mathematics.
2. Apply the models of teaching in teaching mathematics
3. Understand the role of computer in mathematics education.
4. Understand the process of research in mathematics education.

### **Unit I**

- 1.1 Psychology of learning Mathematics- Formation mathematical concepts- the ideas of Piaget and Bruner.
- 1.2 Factor influencing of learning of Mathematics- Motivation, perception, attitude and aptitude- Divergent thinking in mathematics.
- 1.3 Modification of Teacher behaviour with special reference to mathematics teacher-programmed learning- classroom interaction analysis.

### **Unit II**

- 2.1 Models of teaching mathematics- Concept attainment model- advanced organizing model- inquiry training model.
- 2.2 Current trend in curriculum changes in mathematics education – a critical analysis of existing teacher education programme in mathematics- content course of mathematics classes IX, X, XI and XII.

### Unit III

- 3.1 The role of computers in mathematics education at various levels. Relevant computer science topics and technique.

### Unit IV

- 4.1 Meaning need for research in mathematics education- qualities of a good researcher.  
4.2 Problems faced in research in mathematics education.

### Unit V

- 5.1 Graphical Representation of Data – Pie Diagram, Histogram, Frequency Polygon, Frequency Curve, Ogive Curve – Applications of graphs.  
5.2 Normal Probability Curve, Characteristics of normal probability curve.

#### Text Books:

1. Damayanthi Bagyanathan, Teaching or Mathematics (Tamil) Tamilnadu text book society, Madras.
2. Kuppaswami Ayyangar. N. (1964) The teaching of mathematics, A Universal Publication.
3. Parthasarathy(1961), Kanitham Karpithal, The south India saiva siddhanta works.
4. Sundararajan. S.(1960), Theory and practice of teaching of school mathematics, The teacher's publishing house.
5. NCERT: A Test book of Content- cum- Methodology of Teaching Mathematics, NCERT, New Delhi.

#### Reference Books:

1. Ball, W.W.R. (1908) A short history of mathematics, Cambridge university press.
2. Bell, E. T.(1945), The Development of mathematics, McGraw Hill Book Company.
3. Butter, C.H. & Wren F. L (1965), The teaching of secondary mathematics, McGraw Hill Book Company.
4. NCERT: Improving instruction in mathematics.
5. Kulbir Singh Sidhu (2005), The teaching of mathematics, Sterling publications Pvt., Ltd., New Delhi.
6. Thorndike, R.L. & E. Hagen (1970) Measurement and Evaluation in Psychology and Education, New Delhi, Wiley
7. The current mathematics text books in Tamilnadu for standards VI to XII.

## ED210 CONTENT CUM METHODOLOGY OF TEACHING PHYSICAL SCIENCE –II

**Credit: 4:0:0**

**Marks: 40+60**

#### Objectives:

At the end of the course the pre-service teacher will be able to

1. Appreciate the place of Physics and Chemistry in the modern World.
2. Explore activities related to Physical Science content.
3. Construct and standardize diagnostic and aptitude test in Physical Science.

4. Become competent in evaluating Physics and Chemistry books under different curricula.
5. Plan, organize and maintain Higher Secondary level Physical and Chemistry laboratories.
6. Identify the various problems in Indian and in the world and suggest solutions involving the role of science.

**Unit I:**

The meaning of Science – Different branches of Science – Globalization and Science Discoveries and Development in Science.

Justification for including Physics and Chemistry Separately at Higher Secondary level. Models of Teaching – Four Families – Concept Attainment model – Inquiry training model – Lesson Plan based on it.

**Unit II:**

Educational Technology in Science Education – Development of programmed instruction materials – Teaching machines – Computer Assisted Instruction.

Developing lesson plans using the principles of Piaget, Bruner and Gagne. Activity approach in preparing lesson plans. Power point presentation.

**Unit III:**

Evaluating of teaching – Construction of diagnostic test – Construction of aptitude test. Norms testing for scientific attitude and skills objective based testing.

Text books – Physics, Chemistry – Evaluation of different types of text books – CBSE, State Board, ICSE, etc.

**Unit IV:**

Organization and maintenance of separate laboratory for Physics and Chemistry – Organization of practical work including preparation of bench solution of Chemistry, etc., Catering the individual difference, Identification and care of the scientifically talented pupils, Natural Talent Examination, Helping slow and gifted learners.

Research in Science Education – Identifying problems in teaching of Science Education.

**Unit V:**

Problems of Science Teaching in Urban and Rural area – Global problems – Pollution – Diseases – Global warming, Over population, Malnutrition, Superstitious beliefs.

How science teaching can help in solving them Developing scientific temper among the people in the society.

A knowledge of all the concepts in Physics / Chemistry up to XII standard.

**Practical Work:**

1. Construction and standardization of diagnostic test in a Physics or Chemistry unit of standard XI or XII.
2. Practicing (3 sessions each of ten minutes) classroom interaction analysis and presenting the report.
3. Preparation of 3 improvised apparatus that could be used for standard XI or XII.

4. Construction of aptitude test in Science.
5. Preparation of branched programmed material consisting of twenty frames, in science.
6. Preparation of a lesson plan for power point presentation.
7. Collecting instructional materials on two topics in Physics or chemistry that could be used in the classroom.
8. Lesson Plan in concept attainment model and inquiry training teaching model.

**Text Books:**

1. Sharma, R.C., Modern Science Teaching, Dhanpat Raj and Sons, 1985.
2. Thurber, Walter A., and Collette Alfred, Teaching Science in Today's Secondary School, Prentice Hall of India Pvt. Ltd., 1964.

**Reference Books:**

1. Brandwein Paul, E., The Gifted as Future Scientist, New York, Earcourt Deace and World Inc., 1955.
2. Summer, W.I. Teaching of Science, Oxford, 1945.
3. UNESCO.1973.Final Report: International Forum on STL for All, UNESCO, Paris.
4. UNESCO, 1979, The UNESCO Source Book, for Science Teaching. UNESCO. Paris.

**Journals:**

1. Science Education International, ICASE.
2. Current Science, IISC, Bangalore.
3. School, Science, NCERT, New Delhi.
4. Science Teacher – (Monthly), Editorial and Executive Officers. 1201, Sixteenth St., N.W. Washington.
5. Science Today – (Monthly) Ganga Gritha 3<sup>rd</sup> Floor, 6-d, Nugambakkam High Road, Chennai 600 034.
6. Science Reported – (Monthly) Publications and Information Directorate (CSIR) New Delhi.

**Web Sites:**

HYPERLINK “<http://www.sciedu/nsrc.com>” [www.sciedu/nsrc.com](http://www.sciedu/nsrc.com)

**ED211 CONTENT CUM METHODOLOGY OF TEACHING BIOLOGICAL SCIENCES – II**

**Credit: 4:0:0:**

**Marks: 40+60**

**Objectives:** To make the student – teacher to understand

1. Biology Curriculum at the higher secondary and high school level
2. Models of teaching Biology
3. Principles of curriculum construction
4. BSCS, Nuffield and NCERT Curriculum

5. Co-curricular activities
6. Planning, use and maintenance of biology laboratory
7. Professional organization and professional growth of teachers.

### **Unit I: Models of Teaching Biology**

- 1.1 Introduction
- 1.2 Definition
- 1.3 Families – Social, Personal, Information and Behavioural.
- 1.4 Basic elements of models
- 1.5 Illustration for any three models of teaching

### **Unit II: Curriculum Construction**

Definition of curriculum, content, organization  
Principles of curriculum construction  
Nuffield science teaching project  
NCERT Curriculum – National curriculum frame work  
Types of curriculum – Hidden curriculum, core curriculum, activity curriculum, concrete method and topic method.

### **Unit III: Co-curricular activities**

Importance of co-curricular activities  
Field Trips – Importance  
Science Club – organization and activities  
Science museum  
Aquarium, vivarium Terrarium

### **Unit IV: Science Laboratories**

Introduction  
Design of science laboratory for higher secondary  
Purchase of apparatus  
Entry of apparatus in the registers  
laboratory management  
Laboratory discipline  
Accidents in the laboratory  
First aid

### **Unit V: Professional growth of Biology Teachers**

Introduction  
Professional equipment  
Qualities of a Biology teacher  
Duties and responsibilities of biology teacher  
Professional growth and professional organizations



### **Practical**

1. Recording of three models of teaching lessons
2. preparation of biological album
3. Design and implementation of an investigation project
4. An improvised biology model
5. Life history and contributions of any two scientists

### **Text Books:**

1. NCERT (1996). Science for classes IX, X, XI, XII, New Delhi.
2. Innovative Science Teaching- Radha Mohan
3. Teaching of Life Science- L.M.Sharma.

### **Reference Books:**

1. Anderson,C and K. Roth (1992) Teaching for meaningful and self regulated learning of science. Advances in Research of Teaching, Vol. 1.J.Brophy, ed Greenwich, Conn:JAI
2. Arons,A.B. (1983). Achieving wider scientific literacy. Daedalus Spring 91-122.
3. Das, R.C (1985). Mastering the Technique of Teaching. Second Edition, San Francisco.
4. Lowman, J (1995). Mastering the Technique of Teaching. Second Edition, San Francisco.
5. Teaching of Biology.S. Choudhary (2004). APH Publishing Corporation.
6. Jayasree and Digumarti Bhaskara Rao (2004) Discovery Publishing House.
7. Uttam Kumar Singh and A. K. Nayak Science Education- Common Wealth Publishers
8. Teaching of Biology – Veena Pani Pandey (2004) Summit Enterprises.
9. Sood, J.K.(1985)(. Teaching Life Sciences, Kohli Publications, Delhi.
10. Sharma, R.C.: Modern Science Teaching Dhanpat Rai and Sons, Delhi.

## **ED212 CONTENT CUM METHODOLOGY OF TEACHING COMPUTER EDUCATION II**

**Credit : 4:0:0**

**Marks : 40+60**

### **To enable the student – teachers:**

1. To develop interest and appreciate various pedagogical principles in teaching of computer science.
2. To acquire the knowledge of computer systems.
3. To develop skill in 'C' Language.
4. To develop skill in writing learning packages: MS Power- Point and MS Access.
5. To grasp programmes in Visual Basic.
6. To develop skill in designing web sites using HTML.
7. To understand the concepts of E-Learning and latest trends in information technology.

## **Course Contents:**

### **Unit-I**

- 1.1 Need for planning the computer laboratory.
- 1.2 Special features of computer lab.
- 1.3 Settings up the computer lab and infrastructure.
- 1.4 Seminar, Symposium, group discussion, panel discussion, workshop techniques.
- 1.5 Class room interaction analysis.

### **Unit-II**

- 2.1 Types of computers.
- 2.2 Anatomy of a computer.
- 2.3 System board.
- 2.4 Digital versus analog.
- 2.5 Central processing unit.

### **Unit-III**

- 3.1 Fundamentals of C Language.
- 3.2 Character set, C constant, C Variables.
- 3.3 Operators, Control Structures, Loop structures, Arrays and Structures.
- 3.4 Functions, Library functions.
- 3.5 Developing simple C Programs.

### **Unit-IV**

- 4.1 Office automation.
- 4.2 MS\_Powerpoint, creating, creating, presentation, Building presentations, Modifying visual elements, animation effects and linking preparing handouts.
- 4.3 MS\_Access, Planning and creating tables, Creating and using forms, modifying tables.

### **Unit-V**

- 5.1 Introduction to Visual Basic, the VB Screen, the single document interface environment, the help system-tool bars the tool box and custom controls and components. Using the file menu, using the view menu, using the project menu, using the font menu etc,
- 5.2 Introduction to HTML: Document, Anchor tags, head and body section, banner, base element, colorful web page, designing the body section, heading paragraph, formatting characters, font tag, images and pictures.
- 5.3 E-learning CAI, ICAL, ICAT. Designing CAI Lesson, common CAI frames, Teaching Frames, etc....

### **Text Books:**

1. Gine Courter and Annette Marguis, Microsoft office 2000, No experience needed, BPB Publication.
2. Kalkota and Whinston, Frontiers in Electronic commerce, Golgota {publications Pvt., Ltd., New Delhi-2000.
3. Peter Norton, Introduction to computers [4<sup>th</sup> Edition] TATA McGraw Hill.

**Reference Books:**

1. Balaguruswamy, E., Programming in Ansi C, Ed. 2.1, TMH.
2. Flanders, A. Analyzing teacher behavior, Addison Wilesly Publishing Co. USA, 1979.
3. Gary Cornell, Visual Basic 6.0 From the ground up, Tata McGraw Hill, Ed., 2002, [11<sup>th</sup> Reprint].
4. Rick Darnell, et all., HTML 4, Techmedia, New Delhi, 1999.
5. Sanjay Saxena, MS\_Office 2000 for every one, Vikas publishing House Pvt., Ltd., New Delhi, 2001.
6. Thayer, Visual Basic 6.0, Techmedia, New Delhi.

**ED213 CONTENT CUM METHODOLOGY OF TEACHING ENGLISH - II****Credit : 4:0:0****Marks : 40+60****Objectives:**

1. To familiarize the teacher – trainees with the various aspects of the B.Ed. Programme with special reference to the nature of the language skills to be developed.
2. To enable the teacher trainees to acquire knowledge of the sound system of English.
3. To train student teachers in strategies and current techniques of English teaching.
4. To foster the habit of examining syllabi and teaching materials.
5. To enable the teacher trainees to acquire an understanding of role, nature, status and rationale for learning English.

**Unit I: (a) Preliminary Statement:**

1. The role of English in India today – The cause for learning English
2. The objectives of teaching English - general instructional objectives – specific instructional objectives.
3. Teaching English as a ‘Skill’ rather than a ‘knowledge’ subject.
4. Teaching the four basic skills – listening – speaking – reading – writing.
5. Learning the mother tongue and learning a second language – interference and Transfer from the mother tongue – implication for the methods of teaching.

**(b) Teaching Skills:**

1. Benjamin. S. Bloom’s Taxonomy of Educational objectives – cognitive – Affective – Psycho motor domains.
2. Micro – teaching – Principles – skills introducing the lesson – Explanation – using the Blackboard – Reinforcement – stimulus variation – Questioning – Link lesson.
3. Observation – Demonstration lesson - Teacher Educator – Guide Teacher – Peer group.
4. macro teaching – Lesson Plan – Teaching prose – Teaching Poetry – Teaching grammar – Teaching English composition – Teaching Aids – Evaluation.

**Unit II: (a) Listening skill:**

Different kinds of listening material – Listening activity – The phases of a listening class – listening for perception – listening for completion – listening activities – use of listening aids.

**(b) Reading:**

1. Methods of teaching reading to beginners.
2. Reading comprehension – Errors in comprehension – silent reading – loud reading – skimming – scanning.
3. Teaching of vocabulary – Active and passive vocabulary – vocabulary island – content words and structural words – criteria for selection of vocabulary.

**Unit III: (a) Methods of Teaching:**

1. Method – Design – Approach.
2. Approaches to syllabus construction – situational – Oral – structural approach – skill – based – communicative – Notional.
3. Methods of Teaching English – grammar – Translation – bilingual – Direct – Situational – structural communicative method.

**(b) Speaking:**

1. Communicative competence – Importance of spoken English – methods to teach spoken English.
2. Pronunciation – Elements of English phonetics – Sounds vowels – consonants – sounds – Rhythm – Intonation.
3. Oral practice in new language ideas – types of drills – repetition drills – substitution tables – manipulation drills – parallel sentences.

**Unit IV: (a) Writing:**

1. Writing skills – Mechanical skills – grammatical skills – Discourse skills – Integument skills
2. Handwriting – Developing good handwriting – print script writing – cursive writing – speed writing.
3. Types of composition exercises – controlled – guided – Free – Oral composition – Group work – mixed ability grouping – marking code.

**(b) Statistics:**

Drawing up a frequency distribution – Measures of central Tendency – Mean, Medium, Mode – Measures of variability – range – quartile derivation – Average Derivation – standard derivation – correlation – Rank Difference method – graphical representation – Histogram – Frequency polygons – cumulative frequency curve.

**Unit V: (a) Educational Technology:**

1. Teacher need aids – Mechanical Aids
2. Language Laboratory – Programmed learning.
3. Computers Assisted Instruction – Teleconferencing – Question Bank.

**(b) Evaluation:**

1. Characteristics of a good test – Objectivity – Reliability – validity – Feasibility – Item analysis – Item Difficulty – Index – Blue print.

2. Testing Oral Skills – Pronunciation and fluency – Testing grammar and usage – Testing reading skills – Testing vocabulary - Testing writing skills.
3. Practical Teaching.

**Practical Component (work)**

1. Preparation of Micro teaching materials – lesson – caching sheet
2. Preparation of observation schedules.
3. Practice in Phonetic transcription.
4. Preparation of lesson plan – teaching aids.
5. Preparation of flash cards- charts – albums – scrap book.
6. Preparation of communication panel.
7. Practice in use of tape recorder radio lesson, CAI.
8. Preparation of self learning package.
9. Preparation of blue print – question paper.
10. Examination of English Readers - prose – poetry – grammar lesson.
11. Examination of minimal pairs – rhyme schedule.
12. Reading comprehension exercise.
13. Learning from resources.
14. Preparation of materials of composite scene.
15. Preparation of material for picture composition.
16. Preparation of models for teaching.
17. Construction of Achievement test with subjective and objective types of test.
18. Examination of different dictionaries for reference work.
19. Preparation of transparencies for OHP, and slides.
20. Examination of different types of composition exercises.

**Text Books:**

1. Frisby. A.W. (1970) – Teaching English, Longman.
2. Alexander L.G ( 1971) – Guided Composition in English Language Teaching, Longman.
3. Dahin (1967), The Language Laboratory and language learning, Longman, London.

**Reference Books:**

1. Welbring D.A.(1978) National Syllabus, Oup.
2. Bright J.A. and Mc Geepor G.P. (1976), Teaching English as a second language, Longman.
3. Billions J. L. (1962), The teaching of Language teaching.
4. Pit Corder S. (1976), Introducing Applied Linguistics, Penguin Books.
5. Hornby A.S. (1969), The Teaching of structural words and sentence pattern.
6. Gillian Brwson, (1977), Listening to spoken English: Applied Linguistics and language, Longman.
7. Oxford Advanced Learner’s Dictionary.

## ED214 CURRICULUM DESIGN & EVALUATION

Credit: 3:0:0

Marks: 40+60

**Objectives:** At the end of the course the student teacher will

1. understand the concept and definitions of curriculum
2. understand the advantages and constraints of each types of curriculum
3. understand and apply the process of Curriculum Development
4. be able to select and apply appropriate strategies for Curriculum Transaction
5. be able to evaluate curricula.

### Unit I: Concept and Definitions

Concepts of curriculum – Classifications of Curriculum Concepts : Definitions – Curriculum & syllabus – relationships and differences; Need for Curriculum Development ; Curriculum Determinants; National aspirations & needs, Culture, Social Change, Value System , Philosophical, Sociological and Psychological foundations.

### Unit II: Types of Curriculum

Curriculum Organization – Educational Objectives & Curriculum Organization; Selection of learning experiences – 21<sup>st</sup> Century object of education (UNESCO Report 1996); Subject matter & Curriculum Organization, ABC's curriculum organization; Learning & Curriculum organizations; Types of Curricula – Subject Centered, Co-related, Fused, Core, Student-Centered – Their relative values and weakness.

### Unit III: Curriculum Design

Assessing Needs; Formulating Objectives, Selection of Contents; Organization of Control; Selection of Learning experiences; Organization of learning experiences – Models of curriculum Development; Ralph Taylor, D.K., Wheeler and Hilda Taba.

### Unit IV: Curriculum Transaction

Strategies for Curriculum Transaction – Organization for Instructions, Models of teaching; Team teaching – Individualizing the Curriculum – Distance learning modes – Resources for Curriculum Transaction – Computer and the Internet.

### Unit V: Evaluation of Curriculum

The Curriculum cycle – Evaluation as comparing objectives and outcomes – Focus of Curricular Evaluation; Subject content, organization and mode of transaction – Outcome of curriculum Evaluation Change / refinement of content, Organization and modes of transaction – Evaluation of students achievement – Procedure of type. Models of curriculum evaluation. Taylor's Model, Stane's Model, CIPP Model – Goal Free evaluation

### Practical Work:

1. Analysis of a textbook based on the principles of curriculum
2. Preparation of syllabus for a subject of your choice
3. Critical evaluation of the higher secondary level syllabi prescribed in Tamilnadu

**Text Books:**

1. Joyce & Weil, M (1980) Models of Teaching (II Edn.) Englewood Cliffs, N.J. Prentice-Hall
2. Reid.W.A. (1978) Thinking about the Curriculum: The nature and treatment of curriculum problems. Boston: Routledge & Kegan Palul.

**Reference Books:**

1. Babu. E.C. (1971) Curricular Development Projects. In L.C.Deighton (Ed) Encyclopedia of Education (Vol.2) New York, Macmillan.
2. Bloom, B.S. (1965) – Taxonomy of Educational Objectives – Handbook 1: Cognitive Domain; Longmans. Green & Co
3. Bruner, J.S. (1960) The Process of Education; Harvard, Cambridge, University Press
4. Fettuman, David.M (1983) Webs of Learning: Computer and Internet Resources for Educational Research and Institution Educational Researcher pp 22 to 30
5. Foshay.A.W.(Ed) (1980) Considered Action for Curriculum Improvement : Association for Supervision and Curriculum Development yearbook, Alexandria, Va: ASCO
6. Goodlad, J.I. & Associates (1979) Curriculum Enquiry; The study of Curriculum Practice, New York, McGraw Hill
7. Hays, H.E.(1977) Curriculum Development as a Moral Enterprise, Curriculum Inquiry, 1977.6.229-235.
8. Journal of Curriculum Studies, (1980)
9. Kerr.J.K. (Ed) (1968), Changing the Curriculum London University of London Press
10. National Institute of Education Curriculum Task Force (1976) Current Issues, Problems and concerns in Curriculum Development Washington, D.C. The Institute (ERIC Document Reproduction Services No.Ed.124530).
11. Saylor.J.G.Alexander.W.M. & Lewis, A.J. (1981) Curriculum Planning for better teaching and learning (3<sup>rd</sup> Ed.) New York, Dolt , Rinehart & Winston.
12. Schaffarak.J. & Sykes.G.(Eds) (1979) Value Conflicts and Curriculum Issues, Lessons from Research and Experience, Berkeley, Calif: Mccutchar.
13. Schaffarzck.J. & Harupson, D.H. (Eds) (1975) Strategies for curriculum development, Berkeley, Calif: McCutchar.
14. Schwab.J.J. (1978) The Practical: Translation into Curriculum, Westbury & N.J. Wilkins in (Eds) Science, Curriculum and Liberal Education, Selected Essays. Chicagao; University of Chicago Press.
15. Spears, Harold (1955) The Teacher and Curriculum Planning, (3<sup>rd</sup> Edn.), New York, Prentice Hall.Inc

**ED215 EDUCATIONAL GUIDANCE AND COUNSELLING****Credit : 3:0:0****Marks : 40+60****Objectives:** At the end of the course the student teacher will be able to

- 1) Recognize the meaning, nature and need of Guidance services and Counseling in schools.



- 2) Acquire the necessary knowledge about the Guidance services, qualities of the counselor and his functional competencies.
- 3) Describe the different evaluative techniques to collect information about the individuals for effective guidance.
- 4) Differentiate guidance and counseling and explain the professional preparation of a counselor.
- 5) Interpret the values of modern trends in guidance movement.

#### **Unit I. Guidance: Conceptual Aspects:**

Aim of guidance – Need for guidance – Meaning and Definition of guidance – Relation to dedication – Relation to discipline – Modern trends in guidance – Vocational, guidance, Educational guidance, Personal guidance, child guidance clinics, and Specific areas of guidance.

#### **Unit II. Guidance strategies and counseling Techniques:**

Meaning of counselor – Conditions essential for counseling – Types of counseling – client centered, Directive, contrast and comparison – Group guidance and group counseling – Guidance in groups, group counseling, case conference procedures, multiple counseling.

#### **Unit III. Individual's Evaluation for Effective Guidance:**

The concept of Evaluation – Functions of Evaluation and Evaluation Approaches – Informal study Approaches – Observation, Anecdotal records, Autobiographical Sketches, Sociograms and teacher- pupil interviews – Measurement of general and special abilities – Intelligence, Differential aptitude and achievement test – Evaluation of personality – Measurement of personality traits, Projective technique and situational tests – The school testing programme – Individual testing, group testing, construction of case history – Cumulative Records.

#### **Unit IV. Counselling Process:**

Preparation for counseling – Counselling process – Counselling Interactions – Variables affecting counseling process – Counselling interview – Interview technique in counseling Counselor – Counselee relationship – Degree of lead, Silence, Relationship techniques, sharing of experience and resistance.

#### **Unit V. Status of Guidance Movement in India:**

Counselling Movement in modern times – Guidance Movement after Independence – Role of Government of India and Universities – Present Status of Counselling.

#### **Practical Work: Case study of a problematic student**

#### **Text Books:**

1. Shrivastava, K.K (2004), Principles of Guidance and Counselling 2<sup>nd</sup> Ed. New Delhi: Kanishka Publishers.
2. Kochhar, S.K (1984), Educational and Vocational Guidance in Secondary Schools New Delhi : Sterling Publisher.

**Reference Books:**

1. Narayana Rao, S (1991), Counselling and Guidance : Tata MC Graw Hill Publishing Company Limited.
2. Bernad, H.W and Fullmer, D.F (1977), Principles of Guidance 2<sup>nd</sup> Ed. New York: Crowell.
3. Bhargava, M (1982), Modern Psychological Testing and Measurement Agra. H.P Bhargava Book Publishers.
4. Bhatnagar, Asha and Gupta, Nirmala. (1999), Guidance and Counselling Vol. I and II. New Delhi, Vikas publishing House (P) Ltd.
5. Myrick, R.D. (1993) Developmental Guidance and Counselling : A Practical Approach 92<sup>nd</sup> Ed ) Mineapoils, M.N. Educational Media Corp.
6. Ohlen, Merle M. (1974) Guidance Services in the Modern School, 2<sup>nd</sup> Ed. New York: Harcourt Brace Jovanovich, Inc.
7. Pasricha, Prem (1976) Guidance and Counselling in Education. New Delhi, NCERT.

**ED216 EDUCATIONAL MANAGEMENT****Credit : 3:0:0****Marks : 40+60****Objective:** The Student Teacher:

1. Acquires knowledge of the terms and concepts needs in Educational Management.
2. Understands the principles, functions and organization of Educational management.
3. Applies the knowledge in analyzing the roles and supervision method of the present heads of the educational institutions
4. Develops skill in preparing document for effective educational administration.
5. Develops interest in supervision and effective control of educational institutions
6. Develops a desirable positive attitude towards the implementation of educational management

**Course Content:****Unit 1:**

Management – Administration - Meaning, definitions and difference - Functions of management - Educational management - Meaning functions. Theories of management - Principles of good management - Developmental and maintenance

**Unit II:**

Management –Leadership –Styles-Role of Head of the Educational institution in management - Educational Supervision –Meaning –Need-Types aims-Difference between Supervision and inspection-Methods of Supervision.

**Unit III:**

Roles of Teachers - Heads of the institution - inspectors of Schools - DEOs and CEOs on Educational Management - Role of State and Central Government - UGC, NCERT, SCERT on Educational Administration.

**Unit IV:**

Management of Curricular and Co-Curricular activities- Financial management principles and practices - School finance –Planning - School – Community partnership.

**Unit V:**

Issues in Educational Management – centralization and decentralization autonomy and responsibilities - academic freedom - students participation in administration - self financing and aided institutions – Total Quality Management (TQM)

**Practical Works**

1. Preparation of class timetable and master timetable.
2. Preparation of Annual plan for a school.
3. Visit a school and prepare a report based on school office records

**Text Books:**

1. Kocher S.K, Secondary School Administration, New Delhi, Sterling publisher.
2. Sindhu K.S , School Organization and Administration , Jalandhar City international Publishers.
3. Rai B.C, School Organization and management, Lucknow Prakshan Kendra publisher.

**Reference Books:**

1. Cannobell, Coorbally and Ramasayer , Introduction to Educational Administration, Boson Allan and Bacon Inc
2. Education Commission Report 1964-66
3. Ghosh, Prasanta K., Office management, Sultan Chand Publisher
4. Haggert Albert , Practical School Administration II Linois, Garrand Press
5. Kocher S.K, Successful Supervision and Inspection, New Delhi Sterling Publishers
6. Kocher S.K, Pivotal issues in Indian Education, New Delhi, Sterling publisher.
7. Mamoria, CB and Udai Pareck, Personnel management (Management of Human Resources) Banglore, Himalaya publishing house.
8. Mathur S.S, Educational Administration, New Delhi, Amide publisher.
9. Mrityunjoy Banerjee., Business Administration Principles and Techniques., London Asia publishing house
10. Mort Paul R, Principles of School Administration, McGrawHil, publishers.
11. Safaya R.N, Development planning and Problems of Indian Education, Delhi, Dhanpat Rai & Sons.
12. William Stally .W, Educational Administration of Secondary Schools, Holf Rinehart publisher.

## ED217 EDUCATIONAL MEASUREMENT AND EVALUATION

**Credit : 3:0:0**

**Marks : 40+60**

**Objective:** The Student Teacher:

1. Acquires knowledge of the concepts and terms used in educational evaluation.
2. Understands the types and procedure of educational evaluation.
3. Applies the knowledge in construction and measurement of education outcomes.
4. Develops skill in the construction of test and interpretation of test scores.
5. Develops interest in the educational evaluation.
6. Develops a desirable positive attitude towards the study of educational evaluation.

**Course Content:**

### **Unit I**

Measurement - Evaluation – Meaning - Definition Difference - Function of evaluation – Types of evaluation – formative, summative, criterion, referenced – Norm referenced.

### **Unit II**

Objectives – Learning experiences and Evaluation Meaning and relationship – taxonomies of educational objectives.

### **Unit III**

Testing procedure – Oral, written, performance – Measuring instruments - test, observation schedule, rating scales, check lists, cumulative records, anecdotal records, projective techniques – Achievement tests, aptitude test, attitude test, diagnostic test, prognostic test and their purposes.

### **Unit IV**

Achievement test – Meaning – Types of test terms -objective type, short answer type and essay type – Characteristics of test – Objectivity, reliability and validity – Test construction procedures –Standardization.

### **Unit V**

Interpretation of test results - Organization of data – Frequency distribution – Calculation of averages, mean, median and mode – derivations –Normal distribution – skewness, kurtosis – Graphical representation of data -Co-efficient of correlation.

**Practical Work:**

1. Construct an achievement test for a chapter in your optional subject.
2. Draft a tool to measure the attitude of the student towards any concept.
3. Analyze a question paper from objectives point of view.

**Text Books:**

1. Best John W, Research in Education, New Delhi, Prentice Hall of India.

2. Muthumanickam. R , Educational objectives for Effective planning and teaching, Chidambaram, Cyberland publishers.

**Reference Books:**

1. Anastasi, Anne, Psychological testing, London, the Macmillan company.
2. Gronlund Norman E, Measurement and Evaluation of Teaching, New York, Macmillan Company.
3. Adams, G. S, Measurement and Evaluation in education, Psychological of guidebook, New Delhi, Holt, Rinehart & winston.
4. Bhatia K.K , Measurement and Evaluation in Education, Jalundur, Prakash brothers.
5. Bean K.L , Construction of Educational and personal Tests, New York , McGraw Hill company.
6. Bloom Benjamin S , Taxonomy of Educational objectives, Hand book I New York, Longman green and Co.
7. Downie N.M, Fundamentals of measurement, New York, Oxford University press.
8. Ebel, Robert L, Measuring Educational Achievement, New Delhi, Prentice Hall India Pvt Ltd.
9. Karathwohl, Bloom ,Taxonomy of Educational objectives, hand book II The affective Domin, New York., Macmillan Company.
10. N.C.E.R.T, The Concept of Evaluation in Educational, New Delhi, N.C.E.R.T.
11. Ornstein, Allen C. and Francis P. Hunkins, Curriculum, Foundations, Principles and issues, New Jersey, Prentice Hall
12. Srivastava , H.S and J.P shourie, Instructional objectives of School Subjects, New Delhi, NCERT Publication.
13. Tucknan, Bruce W Evaluating instructional programs, Boston, Allyan and Bacon.

**ED218 ENVIRONMENTAL EDUCATION**

**Credit : 3:0:0**

**Marks : 40+60**

**Objectives:** The student teachers:

1. To acquire the knowledge of Environmental Education and its need.
2. To understand the concept and importance of Environmental Education.
3. To provide the fundamentals of Environmental Education.
4. To develop a sense of awareness of different kinds of environmental pollution and problems.
5. To understand the causes of pollution.
6. To grasp different types of environmental crisis and their control.
7. To conserve the natural resources and bio-diversity.
8. To appreciate the guidelines formulated by various conferences and commissions.
9. To develop a sense of responsibility about the role of teachers in fostering the idea of learning to live in harmony with nature.

## Course Content

### Unit I:

- Evolution of Environmental Education.
- Its definition, objectives and significance
- Nature of Environmental Education
- Need of Environmental Education

### Unit II:

- Types of Environmental pollution: social pollution, Marine Pollution, Thermal pollution, nuclear pollution, etc.
- Causes and effects of pollution.
- Hazards due to human activity
- Green – house effect (Global warming) and environmental threat.

### Unit III:

- Bio-diversity
- Conservation of natural resources
- Classification of resources
- Environmental Management and Sustainable Development.
- Green Bench
- Creating community awareness.

### Unit IV:

- Environmental Movements in India
- International Conferences
- Environmental Protection Acts.
- Role of UNESCO
- Environmental Education and Mass Media Programmes.

### Unit V:

- Salient features of Environmental awareness through Teaching – Learning Strategies
- Role of school in environmental conservation and sustainable development.
- Teacher's role in promoting the Environmental Education.

### Field Work:

The student – teachers are expected to visit a local area and submit a Project Report of 500 – 1000 words on any one of the types of pollution.

### Text Books:

1. Anil Kumar De and Arnab Kumar De, “**Environmental Education**”; New Age International Pvt. Ltd., Publishers, New Delhi, 2004
2. Sharma, R.G. “**Environmental Education**”, Metropolitan Book Co. Pvt. Ltd., New Delhi, 1986.

**Reference Books:**

1. Anil Kumar De and Arnab Kumar De, "Environmental Studies", New Age International Pvt. Ltd., Publishers, New Delhi, 2001.
2. Kaayar, V.S., "Environmental Concerns, Depleting Resources and Sustainable Development", Pointer Publishers, Jaipur, 1997.
3. Kumar, R., "Environmental Pollution and Health Hazards in India", Ashish Publishing House, New Delhi.
4. Kumarasamy, K., Alagappa Moses, A and Vasanthy, M., "Environmental Studies, Publication Division", Bharathidasan University, Trichy, 2004.
5. Mitra, A.K., "Urban Environmental in Crisis", New Age International Pvt. Ltd., Publishers, New Delhi, 2000.
6. N.C.E.R.T. "Environmental Studies": Teachers' Guide, 1980.
7. Panneenselvam A. and Mohana Ramakrishnan., "Environmental Sciences Education", Sterling Publishers Pvt. Ltd., New Delhi, 2003.
8. Saxena, A.R., "Environmental Education", Bhargava Book House, Agra.
9. UNESCO – UNEP, "International Environmental Education", Programme, 1990.
10. World Commission on Environmental and Development Our Common Future, o.u.p., 1989.

**ED219 TEACHING COMPETENCY – I (Practical)****Credits: 0:0:2**

1. Use of Teaching skills which are practiced during micro teaching practice
2. Lesson Plan – 20
3. Observation Record – 10
4. Use of Audio visual aids
5. Classroom Management

**ED220 TEACHING COMPETENCY – II (Practical)****Credits: 0:0:2**

1. Use of Teaching skills which are practiced during micro teaching practice
2. Lesson Plan – 20
3. Observation Record – 10
4. Use of Audio visual aids
5. Classroom Management



### **ED221 CONSTRUCTION OF TESTS (Record)**

**Credits: 0:0:2**

1. Applications of Statistics
2. Measures of Central Tendency, Dispersion and Correlation
3. Construction of Questions
  - a. Fixation of Objectives
  - b. Weightage of the content
  - c. Type of questions
4. Preparation of Blue print
5. List out the questions
6. Scoring key with marking scheme
7. Workout the validity and reliability

### **ED222 MICRO TEACHING (Record)**

**Credits: 0:0:2**

The B.Ed. trainees should practice any five of the teaching skills from the followings:

1. Skill of Induction
2. Questioning skills (all skills related to asking question)
3. Using Blackboard
4. Skill of Reinforcement
5. Skill of Explanation
6. Skill of Stimulus Variation
7. Skill of Evaluation (Closure)

### **ED223 PSYCHOLOGY PRACTICAL (Record)**

**Credits: 0:0:2**

The B.Ed. trainees should carry out any six practical works from the followings:

1. Motor dexterity
2. Finger dexterity
3. Memory drum
4. Mirror drawing
5. Pass along test
6. Personality tests
7. Raven's non-verbal Intelligence
8. Projective Technique
9. Value Orientation scales
10. Emotional Intelligence Scales
11. Creativity Test
12. Interest inventory

13. Level of Aspiration
14. Adjustment inventory

### **ED224 CASE STUDY & ACTION RESEARCH (Record)**

**Credits: 0:0:2**

1. Identification of a case ( student / institutions)
2. Identifying a problem for action research
  - a. Objectives
  - b. Hypothesis
  - c. Method
  - d. Results & Conclusions
  - e. Suggestion & Recommendations of the investigator

### **ED225 SCHOOL SURVEY (Record)**

**Credits: 0:0:2**

1. Identifying School for conducting survey
  - a. Introduction about the school
  - b. Infrastructural facilities
  - c. Instructional facilities
  - d. Human resources
  - e. Organizational chart
  - f. Services to the society by the school & conclusion

### **ED226 PHYSICAL EDUCATION (Record)**

**Credits: 0:0:2**

1. Physical Education → Aims & Objectives
2. Need for Physical Education
3. Conduction School Assembly
4. Qualities of any Sportsman and appreciation on him/her
5. Major & Minor Games – Rules
6. Health & Safety Education
7. Yoga and Meditation
8. Lesson plan (3 minimum)
9. First Aid
10. Physical measurement

### **ED227 COMMUNITY SERVICE (SUPW and Arts & Craft) – Record**

**Credits 0:0:2**

1. SUPW: Preparation of Ink, Soap, Phenol, Chalk and Note Book
2. Arts: Flower making, Bouquet, Interior decoration, Wall hanger and Development of display boards.
3. Craft: Embroidery works, prepare nylon wire bags, envelop making, Tray and File making.

### **ED228 CAMP ACTIVITIES & EDUCATIONAL TOUR (Record)**

**Credits: 0:0:2**

1. Camp Activities
  - a. Tree plantation
  - b. Social work
2. Educational Tour
  - a. Planning
  - b. Organizing
  - c. Financing
  - d. Executing
  - e. Evaluating the tour

### **ED229 PRACTICAL RECORD & PREPARATION OF INSTRUCTIONAL AIDS (Record)**

**Credits: 0:0:2**

1. Carry out any four practical in their subject area and submit a Record note
2. Preparation of projected and non-projected instructional aids like charts, models and specimen collection etc.

### **ED230 EDUCATIONAL TECHNOLOGY LAB (Record)**

**Credits: 0:0:2**

The B.Ed. trainees should carry out any six practical works from the followings and submit a Record note:

1. Theoretical outline of Educational Technology (Bloom's taxonomy of educational objectives)
2. Preparation of Information Technology Album
3. Create one Power point presentation in CD on the optional subject
4. Prepare one Audio tape on subject concern

5. Prepare one Learning Module in printed format
6. Prepare 20 number of slides on the subject concern
7. Identify a website and make a critical analysis in terms of content, design and technical features and make a note of it.
8. Operation of Digital moving camera and make a note about the parts and functions of it.
9. Operations of educational Telescope and make a note about the parts and functions of it.
10. Develop a Computer Assisted Instruction (CAI)
11. Developing Charts & film strips
12. Technological improvisation in models of teaching. (make a note about the applications of technology in Education).

## ADDITIONAL SUBJECTS

Code	Subjects	Credit
ED231	Philosophical and Sociological Foundations of Education	3:0:0
ED232	Psycho pedagogical Approach to Education I	3:0:0
ED233	Educational Technology	3:0:0
ED234	Optional I: Content cum Methodology of Teaching Mathematics I	3:0:0
ED235	Optional I: Content cum Methodology of Teaching Physical Sciences I	3:0:0
ED236	Optional I: Content cum Methodology of Teaching Biological Sciences I	3:0:0
ED237	Optional I: Content cum Methodology of Teaching Computer Sciences I	3:0:0
ED238	Optional I: Content cum Methodology of Teaching English I	3:0:0
ED239	Optional I: Content cum Methodology of Teaching Social Sciences I	3:0:0
ED240	Optional II: Content cum Methodology of Teaching English I	3:0:0
ED241	Educational Reforms in National Perspectives	3:0:0
ED242	Psycho pedagogical Approach to Education II	3:0:0
ED243	Instructional Technology	3:0:0
ED244	Optional I: Content cum Methodology of Teaching Mathematics II	3:0:0
ED245	Optional I: Content cum Methodology of Teaching Physical Sciences II	3:0:0
ED246	Optional I: Content cum Methodology of Teaching Biological Sciences II	3:0:0
ED247	Optional I: Content cum Methodology of Teaching Computer Sciences II	3:0:0
ED248	Optional I: Content cum Methodology of Teaching English II	3:0:0
ED249	Optional I: Content cum Methodology of Teaching Social Sciences II	3:0:0
ED250	Optional II: Content cum Methodology of Teaching English II	3:0:0
ED251	Educational Guidance and Counseling	3:0:0
ED252	Educational Management	3:0:0
ED253	Educational Measurement and Evaluation	3:0:0
ED254	Environmental Education	3:0:0
ED255	Writing for Educational Media	3:0:0
ED256	Optional I: Teaching Competency (Practical)	0:0:3
ED257	Optional II: Teaching Competency (Practical)	0:0:3
ED258	Optional I: Micro Teaching I (Record)	0:0:1
ED259	Optional II: Micro Teaching II (Record)	0:0:1
ED260	Optional I: Construction of Tests I (Record)	0:0:1
ED261	Optional II: Construction of Tests II (Record)	0:0:1
ED262	Psychology Practical (Record)	0:0:1
ED263	Case study and Action Research (Record)	0:0:1
ED264	School Survey (Record)	0:0:1
ED265	Physical Education and Health Education (Record)	0:0:1
ED266	Community Service (SUPW and Arts & Craft) (Record)	0:0:1
ED267	Camp Activities and Educational Tour (Record)	0:0:1
ED268	Educational Technology Lab (Record)	0:0:1
ED269	Content cum Methodology of Teaching Commerce I	3:0:0
ED270	Content cum Methodology of Teaching Commerce II	3:0:0
ED301	Philosophical and Sociological Foundations of Education	4:0:0
ED302	Psychology of Learning and Communication	4:0:0

ED303	Methodology of Educational Research and Statistics	4:0:0
ED304	Advanced Educational Technology	4:0:0
ED305	Educational Media Production	4:0:0
ED306	Special Education	4:0:0
ED307	Educational Measurement and Evaluation	4:0:0
ED308	Educational Planning and Administration	4:0:0
ED309	Teacher Education	4:0:0
ED310	Psychology Practical	0:0:2
ED311	Internship Training Programme	0:0:2
ED312	Research Colloquium	0:0:2
ED313	Current Trends in Higher Education	4:0:0
ED314	Methodology of Research and Statistics	4:0:0
ED315	Contemporary Issues in Education and Educational Management	4:0:0
ED316	Educational Media and Instruction	4:0:0
ED317	Teaching Pedagogy	2:0:0

### **ED231 PHILOSOPHICAL AND SOCIOLOGICAL FOUNDATIONS OF EDUCATION**

**Credit: 3:0:0**

#### **Objectives:**

To enable the teacher trainee to understand:

1. The relationship between philosophy and Education
2. Role of education in social change.
3. Educational policies and programmes in India.
4. Develop vision for futuristic programmes in education.
5. Develop international understanding.

#### **Unit I Education and Philosophy**

Education – Meaning, Definition and Aims of Education – Philosophy – Meaning, Definition and Branches of Philosophy - Relationship between Education and philosophy

#### **Unit II Educational Implications of Schools of Thought**

Schools of Philosophy - Idealism, Naturalism, Pragmatism, Realism. Philosophy of Rabindranath Tagore, Swami Vivekananda, Mahatma Gandhi, Sri Aurobindo Ghosh, Dr. S. Radhakrishnan, Froebel, Montessori, Rousseau, John Dewey.

#### **Unit III Sociology and Education**

Sociology - Meaning, Definition and Scope- Functions of a School - School as Subsystem - Relationship between School and Community - Social groups, Social Processes - Social change, Stratification, Social Mobility – Socialization

#### **Unit IV Culture and Democracy**

Culture – Meaning, Definition – Cultural Change – Education and Cultural change – Cultural lag – Social Evils – Democracy: Concept, Forms of democracy – Education and Democracy – Features of Democratic Education

## **Unit V Status of Education in the Indian Constitution**

Universalization of Education – Wastage and Stagnation - Equality of Opportunities  
Education and Fundamental Rights and Duties - Education for National Integration -  
Education for International Understanding

### **References:**

1. Taneja V.R – (1973) Education Thought and Practice, sterling publications, sterling publications, New Delhi.
2. Aggarwal J.C. Philosophical and Sociological Foundations of Education.
3. Saider.K.G. – Problems of Educational reconstruction in India, Asia publishing House, Bombay.
4. Shrinah. K.L – Education in Changing India, Asia publishing House, Madras.
5. Tyogi.P.N. (1991) – Education for All – A Graphic Presentation New Delhi, NIEPA.
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8. Mathur DSA (1966) Sociological – approach to Indian Education Vinod Penatak Mandes, Agra.
9. Gandhi M.K. (1951) Basic Education, Nanajeevan Publishing House, Ahamedabad.
10. Mukherji.Dr. S.N. – Education in India, Today and Tomorrow, Acharya Book Depot, Bawda.
11. Mohanty (1982) Indian Education in the Emerging Indian Society, Sterling Publishers, New Delhi.
12. Lakshmi.S (1989) – Challenges in Indian Education, Sterling Publishers Pvt. Ltd., New Delhi.
13. Dhiman.O.P (2007) Foundations of Education, APH Publishing Corporation, New Delhi.

## **ED232 PSYCHOPEDAGOGICAL APPROACH TO EDUCATION I**

**Credit: 3:0:0**

### **Objectives:**

At the end of the course, the student teacher will be able to

1. Realize the significance of psychological basis in education
2. Explore the pivots of psychological basis in education learning experience, learning environment, learning process and the teacher, in detail.
3. Acquire sufficient knowledge and understanding about the nature and scope of Psycho pedagogical approach to education.
4. Apply the principles of psycho pedagogical approach in classroom situation and education.



## **Unit I Introduction to Psycho Pedagogical Approach**

Concept and definition of Educational psychology. Nature and Scope of educational psychology. Branches of Psychology. Applications of psychology to Education. Significance of Psycho pedagogical approach.

## **Unit II Human Growth and Development**

Meaning and principles of growth and development – Phases of Development – Stages of Development – Difference between growth and development — Heredity and Environment – Nature and nurture.

## **Unit III Cognitive Factors in Learning**

Cognitive process – Attention – Factors affecting attention – Span of Attention – Sensation and Perception – Characteristics, Organization and Principles of perception – Concept Maps and Formation – Creativity – Bruner's Theory – Piaget's Cognitive Development.

## **Unit IV Learning Theories and Process**

Nature and importance of Learning – Types of Learning – Theories of Learning – Thorndike, Pavlov, Skinner, Kohler and Gagne – Learning Curve – Transfer of Learning, – Remembering and Forgetting – Curve of Forgetting – Individual Differences in Learning.

## **Unit V Role of Motivation in Learning**

Definition and concept of Motivation – Role of instinct, needs, drives and motives – Hull's Drive Reduction theory, Maslow's Hierarchy of Needs – Achievement Motivation – Motivation in the classroom – Level of Aspiration.

### **References:**

1. *Bhatia, H. R. (1977), Textbook of Educational Psychology, The McMillan Company of India Ltd., New Delhi.*
2. *Aggarwal, J. C. (1995), Essential Educational Psychology, Vikas Publishing House Pvt. Ltd., New Delhi.*
3. *Chauhan, S. S. (1988), Advanced Educational Psychology, Vikas Publication, New Delhi.*
4. *Sharma, K. N. (1990), Systems, Theories and Modern Trends in Psychology, HPB, Agra.*
5. *Rao s. Narayan (1990), Educational Psychology, Wiley Eastern Ltd., New Delhi.*
6. *Dececco, J. P. (1977), The Psychology of Learning and Instruction, Prentice Hall of India Pvt. Ltd., New Delhi.*
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8. *Kakkar, S. B. (1989), Educational Psychology & Guidance, The Indian Publication, Hill Road, Ambala, Cantt.*
9. *Mangal, S. K., Educational Psychology.*
10. *Sprinthal & Sprinthal, Educational Psychology – Developmental Approach.*
11. *Bruce, Joyce & Weils & Howers, Models of Teaching.*
12. *Garrett, H. E., Statistics in Psychology and Education.*

13. Mangal, S. K., Introduction to Statistics in Education.
14. Boaz, G. D., Educational Psychology.
15. Chauhan, S. S., Mental Hygiene.
16. Hurlock Elizabeth, Developmental Psychology
17. Dandekar, W. N. , Psychological Foundations of Education
18. Crow & Crow, Educational Psychology.
19. Soch & Gupta, Educational Psychology.
20. Simpson, R. C., Fundamentals of Educational Psychology.

## **ED233 EDUCATIONAL TECHNOLOGY**

**Credit: 3:0:0**

### **Objectives:**

At the end of the course the student teacher will have an understanding of

1. Need and Scope of Educational Technology
2. Models and Strategies of Teaching
3. Importance of communication techniques in education.
4. Recent trends in imparting education due to technological development.

### **Unit I Educational Technology**

Educational Technology – Meaning, Definition - Need and Scope – Types of Educational Technology – Technology in Education – Technology of Education – Uses of Educational Technology in Teaching and Learning – Role of Teacher in Educational Technology

### **Unit II Teaching Aids**

Teaching aids –Principles of Using Teaching Aids - Classification of Teaching Aids – Projected Aids: Slide Projector, Filmstrip Projector, OHP, LCD Projector – Non-projected Aids :Graphic Aids, Charts , Display Boards, Models – Improved Teaching Aids – Uses of Teaching Aids - Dale’s Cone of Experience

### **Unit III Models of Teaching**

Models of Teaching: Meaning, Definition –Fundamental Elements – Uses of Models of Teaching– Types of Teaching Models – Teaching Strategies – Types of Strategy – Autocratic, Democratic and Laissez-faire

### **Unit IV Communication**

Communication: Meaning, Types, Elements, Models, Networks and Barriers of Communication - Factors affecting communication – Classroom Communication: FIACS - RCS – ETC - RCEAS

## **Unit V Recent Trends in Educational Technology**

Meaning and Applications of Multimedia – Educational Electronic Media – Radio, Television, CC Tv, Internet, Websites - Preparation of Lessons – Digital Conference – Role of Mass media in Education - EDUSAT

### **References:**

1. Sampath.K.Panneerselvam.A and Santhanam.S. (1984) Introduction to Educational Technology, Sterling Publishers Pvt. Ltd., New Delhi
2. Kumar K.L.(2004) Educational Technology, New Age International Punlishers, New Delhi.
3. Rogers.E. M(1983) Diffusion of Innovations, The Free Press, New York.
4. Sampath.K.Panneerselvam.A and Santhanam.S. (1984) Introduction to educational technology, Sterling Publishers Pvt. Ltd., New Delhi.
5. Selinger.M and Pearson.J (1999) Telematics and Education, New York
6. Shukla.P.D (1976) Towards the New Pattern of Education in India, Sterling Publisher, New Delhi.
7. Mangal. S. K (2002) Advanced Educational Technology, Tandon Publication, Ludhiana,

## **ED234 OPTIONAL I: CONTENT CUM METHODOLOGY OF TEACHING MATHEMATICS I**

**Credit: 3:0:0**

**Objectives:** To enable the student-teachers to

1. Acquire the knowledge and the process of teaching mathematics.
2. Understand the process of curriculum construction in mathematics
3. Understand the recent trends in teaching mathematics.

### **Unit I History and Background of Mathematics**

Mathematics: Meaning, Nature and values - Historical development of mathematics – Contribution of mathematicians: Euclid, Pythagoras, Bertrand Russell, Aryabhata, Bhaskaracharya, Brahmagupta, Rane Descartes and Srinivasa Ramanujam – Modern Mathematics – Understanding of modern mathematics – Importance and aims of Modern mathematics – Structure of Mathematics

### **Unit II Aims, Objectives and Planning of Teaching Mathematics**

Aims and objectives of teaching mathematics – Instructional objectives – General and specific objectives - Planning – meaning, importance and purpose – Year plan, unit plan, lesson plan – Micro Teaching: Concept of Micro teaching.

### **Unit III Methods and Techniques of Teaching Mathematics**

Methods of development in teaching Mathematics: Inductive, Deductive, Analytic, Synthetic - Methods of Teaching Mathematics: Laboratory, Heuristic, Problem Solving, Project method, Graphical Method, Situational Method, Puzzle Integrated Method (PIM), Correlation Method - Techniques of teaching mathematics – oral, written, drill, assignment, supervised study - Teaching aids – preparation and use of teaching aids.

#### **Unit IV Mathematics Curriculum**

Curriculum in Mathematics: Meaning, Principles of curriculum construction in mathematics, Development of a curriculum in mathematics – Existing Mathematics curriculum: Nature and Defects - Mathematics text book: characteristics of text book, appropriate use of text book, Mathematics text book evaluation

#### **Unit V Recent trends in Teaching Mathematics**

Mathematics Club: Need, Importance and Organisation - Role of e-club in teaching mathematics – Mathematics Library – Mathematics Laboratory – Multiple Intelligence Activity Based Teaching (MIABT) in Teaching Mathematics.

#### **References:**

1. Packiam S. (1987) Teaching of Modern Mathematics and Test and Measurement Gandhimathi Publication, Tuticorin.
2. Aggarwal S.M. (2001) A course in Teaching of Modern Mathematic.
3. Dr. Anice James (2005) Teaching of Mathematics, Nerkamal Publications Pvt. Ltd.,
4. Kulbir Singh Sidhu (2005) The teaching of Mathematics, sterling Publishing Pvt. Ltd., New Delhi.
5. Charles H. Butter (1960) The Teaching of Secondary Mathematics, McGraw Hill Book Company, New York.
6. Kennelli J. Travers et al., (1977) Mathematics Teaching, Happer and Row Publishers, New York.
7. Abbot, Edwin A. Flatland (1963) A Romance of many Dimensions, Barnes and Noble, New York.
8. James T. Glover (2001) Vedic Mathematic for schools, Mobilal Banarsidars Publishers Pvt. Ltd., Delhi.
9. Marforam D.T.E (1974) Teaching Mathematics, Hernemann Educational Books Limited, London..
10. Chitrangada Singh R.P. Rohatgi (2005) Dominant publishers and distributors Delhi.
11. S.K. Mangal (2005), Teaching of Mathematics, Tandon Publications, Ludhiana.
12. [http://itslj.org/articles/Gurrie-MI\\_theories.html](http://itslj.org/articles/Gurrie-MI_theories.html).
13. Gardner, H. (1985), Frames of Mind: The theory of Multiple Intelligence, New York, Basic Book Inc.

### **ED235 OPTIONAL I: CONTENT CUM METHODOLOGY OF TEACHING PHYSICAL SCIENCES I**

**Credit: 3:0:0**

#### **Objectives:**

At the end of the course the pre- service teacher will be able to

1. Realize the aims and objectives of teaching physical science.
2. Become aware of different microteaching skills and methods used in the teaching of physical science.

3. Identify the principles of curriculum construction.
4. Construct and standardize achievement tests in physical science.
5. Emphasize criteria in selecting a good science textbook.
6. Organize and maintain physical science laboratory, plan club activities.
7. Ascertain the special qualities required of physical science teacher,
8. Become complete in following relevant evaluation techniques.

### **Unit I**

Nature and scope of Physical Science – Nature of Science – (Product and Process) – A body of Knowledge – Areas of knowledge related to Physics and Chemistry –correlation of physical science with other subjects.

### **Unit II**

Taxonomy of educational objectives - Teaching physical sciences with reference to Bloom's Taxonomy - Objective Based instruction, instructional objectives and specifications Planning of Instruction - Importance of planning, Year plan, Unit plan and Lesson plan.

### **Unit III**

Methods of Teaching Physical Science – Scientific method – induction –deduction method, Lecturer method – Lecture cum demonstration method – Individual Practical work as a method – Analytic and Synthetic method, Heuristic approach-Project method – Historical and Biographical approaches - Micro Teaching – Link Practice

### **Unit IV**

Curriculum Construction in Physical Science – Principles of Curriculum Construction Criteria of selection of content matter – Organization of content matter Critical evaluation of Tamil Nadu Secondary School Science Curriculum - Curriculum improvement projects in India (NCERT) and Abroad (Chemistry PSSC, CBA and Nuffield.) - Qualities of a good Science textbook – use of text books inside and outside the classroom - Criteria for evaluation of science textbook

### **Unit V**

Evaluation: meaning, principles and types of evaluation -Test and Measurement – meaning, types of tests, characteristics of tests, Construction of tests: blue print, scoring procedure – Standardization of Test - Analysis and interpretation of test results – measures of central tendency, standard deviation and rank correlation

### **References:**

1. 1.Dr.T.K. Mathew, Dr. T.M. Mollykutty, Science Education Theoretical Bases of Teaching and Pedagogic Analysis May 2006.
2. Dr. Sivarajan , Prof. A. Faziluddin, Science Education Methodology of Teaching and Pedagogic Analysis.
3. Anderson, R.D et al, 1992, issues of Curriculum Reform in Science, Mathematics and Higher order Thinking Across the disciplines. The Curriculum Reform Project, University of Coloradio, U.S.A.

4. Carin & Robert Sund, 1989. Teaching Modern Science (Fifth Edition) Merrill Publishing Co., U.S.A.
5. Edgar Dale, Audio-Visual Methods in Teaching. Revised Edition. The dry den press, New York.
6. Garrett statistics in psychology and education vakils feffer and Simons Ltd., Bombay 1979.
7. Gupta S.K., Teaching of Physical Science in Secondary Schools Sterling's Publication (Pvt) Limited, 1985.
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### **ED236 OPTIONAL I: CONTENT CUM METHODOLOGY OF TEACHING BIOLOGICAL SCIENCES I**

**Credit: 3:0:0**

**Objectives:** The student Teacher understands

1. The basic principles of the Biological Science education at the Secondary level.
2. Competency in teaching the subject in terms of methods, skills and techniques.
3. Understands traditional method of teaching and contrasts them with modern trends.
4. Importance of development of skills.
5. The use of aids and all other types of instructional materials.
6. Appreciates the modern trends in teaching biology.
7. Become complete in following relevant evaluation techniques.

#### **Unit I**

Nature and scope of Biological Science – Nature of Science – (Product and Process) – A body of Knowledge – Areas of knowledge related to Physics and Chemistry –correlation of Biological science with other subjects.

#### **Unit II**

Taxonomy of educational objectives - Teaching Biology with reference to Bloom's Taxonomy - Objective Based instruction, instructional objectives and specifications - Planning of Instruction - Importance of planning, Year plan, Unit plan and Lesson plan

#### **Unit III**

Micro Teaching – various skills, Link Practice – Macro Teaching - Methods and approaches of Teaching Biological Science - Lecture method, Demonstration method, Heuristic method, Project method, Problem solving Method, Dalton plan - Team Teaching - Process Vs Product approach in Biological Science Teaching.

#### **Unit IV**

Importance of AV aids - Principles for the selection and use of AV aids - Types of AV aids – Chalk board, Charts, Diagrams, Pictures, Flannel Board, Bulletin Board, Radio,



TV, Tape recorder, Films, Nature study - Relationship among various kinds of AV material

### **Unit V**

Evaluation: meaning, principles and types of evaluation -Test and Measurement – meaning, types of tests, characteristics of tests, Construction of tests: blue print, scoring procedure – Standardization of Test - Analysis and interpretation of test results – measures of central tendency, standard deviation and rank correlation

### **References:**

1. Dr.T.K. Mathew, Dr. T.M. Mollykutty, Science Education Theoretical Bases of Teaching and Pedagogic Analysis May 2006.
2. Dr. Sivarajan , Prof. A.Faziluddin ,Science Education Methodology of Teaching and Pedagogic Analysis.
3. Buffaloe Neal and Thronebery, J.B., Principles of Biology Teaching, Prentice-Hall of India Limited, 2<sup>nd</sup> Edition, New Delhi, 1972.
4. Chauhan S.S., Innovation in teaching learning process, Vikas publishing House, New Delhi, 1985.
5. Garrett, H.E. Statistics in Psychology and Education Vakils Feffer and Simons Ltd., Bombay 1979.
6. Green, T.L, The Teaching of Biology in Tropical Secondary School, Oxford University Press, 1965.
7. Heiss E.D., Obown. S. and Hoftman C.W., Modern Science Teaching, Macmillan Company Press, New York, 1961.
8. Jean Bremmen, Teaching of Biology, Macmillan, St. Martin’s Press, New York.
9. John S. Richardson, Science Teaching in Secondary Schools, Prentice Hall, 1962.
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11. Miller and Blaydes, Methods and Materials for Teaching Biological Science, McGraw Hill, 1962.
12. Nair, C.P.S., Teaching Science in our Schools, S. Chand and Co. (Pvt.) Limited 1971.

### **ED237 OPTIONAL I: CONTENT CUM METHODOLOGY OF TEACHING COMPUTER SCIENCES I**

**Credit: 3:0:0**

To enable the Teacher Trainee:

1. To acquire the knowledge of computer science
2. To understand computer, its kinds, its parts and uses in secondary and higher secondary schools (Hardware and Software)
3. To understand the general and specific skills in teaching computer science.
4. To acquire the knowledge of Lesson Plan Writing and Micro-Teaching skills.
5. To familiarize with the various methods of teaching computer science.
6. To acquire the knowledge of tests, Blue print, Evaluation and remedial measure.



7. To develop skill in Office Automation: MS Office 2000, MS Word 2000 and MS Excel 2000.

### **Unit I Nature and Scope**

Brief history of development of computers - Nature and scope of computer science - Types of computers - Uses of computers in school teaching - Computer Hardware, its parts and importance of computer - Computer Software, its importance and uses - The computer generations - Printers : Laser and Jet Printers.

### **Unit II Aims, Objectives, Microteaching and Lesson Planning**

General and Specific instructional objectives of teaching computer science, Bloom's Taxonomy. Herbartian steps and Lesson Plan Writing at Primary, Secondary and Higher Secondary levels. Micro-teaching

### **Unit III Methods**

Inductive and Deductive methods of Teaching Computer Science Heuristic method. Laboratory method. Programmed Learning : linear and Branching method. Computer Assisted Instructions (CAI) and Computer Managed Learning (CML)

### **Unit IV Applications**

MS Office Introduction, Editing in Office, Selecting, Moving, Copying, working with files, fonts and font styles, editing document texts. MS Word 2000 Introduction, typing letters editing and printing. Using spell check and Thesaurus. Designing a cover page and word art. MS Excel Entering and changing information and formula, Admission detail of students in various courses. Printing graphs and charts for the given data.

### **Unit V Curriculum and Evaluation**

Principles of curriculum development – criteria of selection of content and principles of organizing the selected content. The concept of evaluation – evaluation for achievement diagnosis and prediction – various kind of test – principles of construction and administration of an achievement test - characteristics of a good test – Blue print – On-line examination.

### **References:**

1. Chauhan, S.S., Innovations in teaching Learning Process, Vikas, Publishing house, New Delhi-1985.
2. Gear, C.W., Computer Organization and programming, McGraw Hill Publishing company – 1986.
3. GregPerry, Teach yourself Windows in 24 Hours, Techmedia Publishing company – 1998.
4. Gorden, B.Davis, introduction to computers, McGrew-Hill Publishing company-1982.
5. Passi, B.K., Becoming a better Teacher and Micro Teaching approaches, Sahitya Mundralaya, Ahamadabad, 1976.
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7. Siddigi, N.N. and Siddigi, M.N., Teaching of science Today and Tomorrow, Doaba House, New Delhi-1998.
8. Stanley Progrow, Education in the computer age, Sage Publications, India – 1983.
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10. Taxali, R.K., PC Software for windows made simple, Tata McGraw Hill India Ltd., New Delhi - 1998.

## **ED238 OPTIONAL I: CONTENT CUM METHODOLOGY OF TEACHING ENGLISH I**

**Credit: 3:0:0**

### **Objectives:**

1. To enable the teacher trainees to acquire knowledge of the sound system in English and to familiarize them with the appropriate terminology to describe the sounds in English.
2. To enable the teacher trainees to understand the connections of English speech and to acquire good pronunciation and fluency of speech.
3. To familiarize teacher trainees with the syllabi related to high school and Higher Secondary classes.
4. To understand the traditional as well as technological resources in instruction.

### **Unit I**

#### Teaching of Phonetics

Meaning and definition of Phonetics, Phoneme, Phonology – Syllable: Meaning, Syllable division, types – mono syllabic, trisyllabic and polysyllabic words – Organs of speech, Speech mechanism – Classification of consonant sounds according to place and manner of articulation, description of each phoneme according each manner.

### **Unit II**

#### Teaching of pronunciation and improving oral fluency

How to teach pronunciation: Utilization of Audio-visual learning materials, minimal pairs, tongue twisters, directed and non directed activities, listening to recorded and live listening materials. Enhancing oral fluency: Drilling method, different types of drilling, task-based drilling activities – practicing non-drilling activities. Role of teacher: creating and sustaining language acquisition.

### **Unit III**

#### Curriculum, Syllabus and Books

Curriculum-Principles of curriculum construction and modern trends, need for curricula to meet individual differences and special curricula for the gifted and slow learners. Syllabus – Different types (structural, skill-based, situational, topical and notional). Criteria of books, journals etc. – School libraries reading and community resources.

## **Unit IV**

### **Traditional Resources**

A survey of traditional resources used for instruction in English education (Models, Language Games, Music, Drama, Literature, Periodicals and Role Play)

## **Unit V**

### **Technological Resources**

A survey of the technological hardware and software used in instruction and their classification and application to English education.

### **References:**

1. Allen W.S. "Living English Structure Longmans, 1954".
2. Allen W.S. "Living English Speech Longmans, 1954".
3. Daniel Jones "English Pronouncing Dictionary, Dent 1948".
4. George "101 Substitution Tables for Students".
5. Gimson A.G. "An Introduction to the Pronunciation", Arnold
6. Hill L.A. "Teaching of English as a foreign Language", O.U.P. 1967
7. Hornby A.S. "The Teaching of Structural Words and Sentence patterns" ELBS & O.U.P. 1975
8. Krishnaswamy "Modern English Grammar Composition", Macmillan 1975.
9. Morris I "The Teaching of English as Living Language" Macillan 1954.
10. Robert Lado, Language Teaching McGraw Hill, 1964

## **ED239 OPTIONAL I: CONTENT CUM METHODOLOGY OF TEACHING SOCIAL SCIENCES I**

**Credit: 3:0:0**

### **Objectives:**

1. The student teacher develops an understanding of all topics that he has to teach in Social Sciences.
2. Aims and values, instructional objectives and methods of teaching such topics.
3. The procedures for developing school curriculum.
4. Curriculum activities pertinent to the teaching of Social Science.
5. Modern techniques of teacher – preparation for effective teaching and for evaluation.

### **Unit I Nature and Structure of Social Sciences**

History – meaning definition, nature, characteristics of Social Sciences - Different conception of History – Biographic and evaluating. Conception: Social sciences as evaluation of philosophical economic and social and as evaluation of civilization - Social Sciences as a record of the past – relevance to present and future - Scope of Social Sciences – dimensions of History – continuity development time, place, idea - Social sciences as a Science and Art - Correlation with other subjects.

## **Unit II Aims, Goals, Objectives and Values of Studying Social Sciences**

Teaching and learning of Social Sciences - Year plan, unit plan and lesson plan – preparation need - Formulation of performance- objectives- Books and Ideas makers views cognitive affective and psychomotor levels values – practical, cultural, ethical, disciplinary values of teaching History - preparation – year plan – Unit plan and lesson plan

## **Unit III Institutional Strategies**

Traditional Methods – lecturer, oral, recitation, review, drill, story telling and inductive deductive story telling - Modern methods laboratory method, demonstration, role play and dramatization, role play dramatization- historical method - Project method and problem solving approach - Field Trips and Excursions - Social Sciences teacher-characteristics –.Micro teaching skills

## **Unit IV Learning Strategy**

Assignment – oral, written and drawing forms – work books - Preparation of models and specimens - Visits to related fields – temples – museums, Art galleries, Exhibitions collection of specimens – stamps, coins - Reading of books, Historical novels, magazines, news papers and learning from other media - Self learning materials and using instrumental materials - Motion pictures, Video tapes, radio

## **Unit V Evaluation**

Evaluation: meaning, principles and types of evaluation -Test and Measurement – meaning, types of tests, characteristics of tests, Construction of tests: blue print, scoring procedure – Standardization of Test - Analysis and interpretation of test results – measures of central tendency, standard deviation and rank correlation

## **References:**

1. Willey E.B,” social studies in High Schools” health & Co.
2. Binny & Binny, “Teaching the social studies in Sec.Schools “, McGrew Hill BookCo., New York, 1952.
3. Smith-Elal, “Educational Encyclopedia” Prentice Hall, New York,1961.

## **ED240 OPTIONAL II: CONTENT CUM METHODOLOGY OF TEACHING ENGLISH I**

**Credit: 3:0:0**

## **Objectives:**

1. To familiarize the teacher – trainees with the various aspects of the B.Ed. Programme with special reference to the nature of the language skills to be developed.

2. To enable the teacher trainees to acquire knowledge of the sound system of English.
3. To train student teachers in strategies and current techniques of English teaching.
4. To foster the habit of examining syllabi and teaching materials.
5. To enable the teacher trainees to acquire an understanding of role, nature, status and rationale for learning English.

### **Unit I:**

#### **Preliminary Statement**

The role of English in India today – The cause for learning English

The objectives of teaching English - general instructional objectives – specific instructional objectives.

Teaching English as a ‘Skill’ rather than a ‘knowledge’ subject.

Teaching the four basic skills – listening – speaking – reading – writing.

Learning the mother tongue and learning a second language – interference and Transfer from the mother tongue – implication for the methods of teaching.

Language Laboratory.

### **Unit II**

Methods of teaching – Design – Approach – Situational – Oral – Structural- Skill-based – communicative Notional – Methods of teaching English – grammar – Translation – bilingual – Direct – Structural communicative method.

### **Unit III**

Lesson plan – teaching prose - teaching of vocabulary – active and passive vocabulary – vocabulary island – content words and structural words – criteria for selection of vocabulary – Teaching aids – Teaching poetry – Teaching grammar.

### **Unit IV**

Listening Skills – Different kinds of listening materials – listening activity – The phases of a listening class – listening for perception – listening for completion – use of listening aids. Reading Skills – methods of teaching reading to beginners – Reading comprehension – silent reading – loud reading – skimming – scanning.

### **Unit V**

Speaking Skills -Communicative competence – Importance of spoken English – methods to teach spoken English – Oral practice in new language ideas – types of drills – repetition of drills – substitution tables – manipulation drills – parallel sentences. Writing skills – Mechanical skills – grammatical skills – Discourse skills – Integument skills - Handwriting – Developing good handwriting – print script writing – cursive writing – speed writing.-Types of composition exercises – controlled – guided – Free.

### **Reference Books:**

1. Welbring D.A.(1978) National Syllabus, OUP.
2. Bright J.A. and Mc Geepor G.P. (976), Teaching English as a second language, Longman.

3. Billions J. L. (1962), The teaching of Language teaching.
4. Pit Corder S. (1976), Introducing Applied Linguistics, Penguin Books.
5. Hornby A.S. (1969), The Teaching of structural words and sentence pattern.
6. Gillian Brwson, (1977), Listening to spoken English: Applied Linguistics and language, Longman.
7. Oxford Advanced Learner's Dictionary.

## **ED241 EDUCATIONAL REFORMS IN NATIONAL PERSPECTIVES**

**Credit: 3:0:0**

### **Objectives:**

To enable the teacher trainee to understand

1. The role of nation in bringing out reforms in the field of education.
2. The education at different levels.
3. Different boards of education.
4. The development of education in India.

### **Unit I Education before Independence**

Vedic Education – Buddhist Education – Islam Education – Christian Missionaries contribution - Charter of 1813 - British system of Education, Macaulay's Minutes 1835 - Filtration Theory, Woods Despatch 1854, Hunter Commission 1882 – Education Wardha Scheme of Education (1937) (Basic Education) – Impact of English Education in India

### **Unit II Education after Independence**

Radhakrishnan commission (1948) – Mudaliar Commission (1952-53) – Kothari Commission (1964-66) – National Policy on Education (1986) – Revised National Policy on Education (1992) – Yespal Committee (1993) – SSA (2000) – National Curriculum Framework 2000

### **Unit III Boards of Education**

Types of Education – Formal, Non Forma, Informal - Education at different levels – Pre Primary, Primary, Post primary, Secondary, Higher Secondary – Statutory Boards – CBSE, ICSE, Anglo Indian, Matriculation, State board – National Education Bodies - NCTE, NAAC, NCERT, UGC, ICSSR, AICTE, MCI, ICAR

### **Unit IV School Education in India**

Community Schools – Neighbourhood Schools – SMART Schools – School Complex – Navodhaya Vidhyalaya – Kendra Vidhyalaya – Sainik School – Defence Academies – De Schooling –Distance Education – Open learning and Virtual Classes

### **Unit V Teacher Education**

Teacher Education – Meaning – Aims – Objectives - Role of Teachers in the emerging Indian Society – Accountability of Teachers – Competency based Teacher Education – Pre service Education – In-Service Teacher Education.



**References:**

1. Thankachan. T. C. (2006), Philosophical and Sociological Bases of Education, Aaromal Group, Kerala.
2. Taneja, V.R.(2003) Educational Thoughts and Practice, Sterling Publishers, New Delhi
3. Dash B.N. (2002) Teacher and Education in the Emerging Indian Society, Nilkamal Publications, Hyderabad.
4. Mohanty, J Indian Education in the Emerging Society, Sterling Publishers, New Delhi.
5. Chaube, S.P, Swmiji Vivekananda: A Study, Ashish Publishing House, New Delhi
6. Aggarwal, J.C. (1985), Theory and Principles of Education, Vikas Publishing House Pvt. Ltd.
7. Seetharam A.S.(2005), Philosophies of Education, Ashish Publishing House, 8/81 Punjabi Bagh.
8. Rai B.C.(1986), History of Indian Education, Prakash Kendra, Lucknow.
9. Agarwal J.C. & S.P.Agarwal (1991), Educational and Social Upliftment of Backward Classes, Concept Publications.
10. Bhatnagar,S. (1981), Indian Education Today and Tomorrow, Loyal Book Depot, Meerut.
11. Mukherji,H.S.(1966), History of Education in India – Modern Period, Acharya Book Depot.
12. Bhatia, B.D.(1983), Theory and Principles of Education, Doaba House.
13. Swaroop Saxena (2002), Principles of Education, R.Lall, Meerut.

**ED242 PSYCHOPEDAGOGICAL APPROACH TO EDUCATION II****Credit: 3:0:0****Objectives:**

At the end of the course, the student teacher will be able to

1. Understand the concept of Personality and Intelligence
2. Construct and administer Psychological tests and evaluation
3. Understand the concept of guidance and counseling, mental health and hygiene.
4. Apply the method of psychological tests in classroom situation.

**Unit I Personality Theories and Tests**

Meaning and Definitions of Personality – Major determinants of personality – Theories of Personality: Psychoanalytic and Humanistic theories – Assessment of Personality.

**Unit II Intelligence Theories and Tests**

Meaning and definition of intelligence – Theories of Intelligence – Single, Two Factor and Multi Factor Theories – Guilford's Structure of Intellect – Emotional Intelligence,



Multiple Intelligence – Individual differences in Intelligence – Intelligence Tests and their uses.

### **Unit III Psychological Test Construction and Measurement**

Meaning and concept of tests – Characteristics and construction of standardized psychological tests – Types of psychological tests: cognitive & non-cognitive tests – Uses and limitations of psychological tests – Methods of psychological tests: online, paper-pencil and apparatus methods.

### **Unit IV Mental Health and Mental Hygiene**

Meaning and definition of Conflict, Stress and Frustration – Concept of Adjustment – Causes of Maladjustment – Symptom of Maladjustment, Defence Mechanisms – Problem Children – Concepts of Mental Health and Mental Hygiene.

### **Unit V Guidance and Counseling**

Meaning and Definitions of Guidance and Counseling – Difference between Guidance and Counseling – Need and Types of guidance & counseling: Educational, Vocational and personal – Identification of individual with counseling needs – Counseling techniques – Individual and group techniques, Psychotherapy and psychoanalysis.

#### **References:**

1. Adams, J.A. (1992): Learning and Memory: An Introduction, Home wood, Illinois: Dorsey Press.
2. Adams, H.E. (1992); Psychology of Adjustments, New York : Ronald.
3. Bhatnagar, Asha and Gupta, Nirmala (1999) : Guidance and Counseling. Vol.1 & II, New Delhi: Vikas Publishing House.
4. Boaz., G.D (1968) : General Psychology; Institute of Psychological Service, Madras.
5. Broady E.B and Body, N.(1996); Intelligence; Nature, Determinants and Consequence, New York; Academic Press
6. Butcher H.J., (1993) Human Intelligence: Its Nature and Assessment, New York.
7. Butcher and Javils N (1993) Objective personality Assessment, New York: Academic Press.
8. Coleman, Daniel (1998), Working with Emotional Intelligence, New York Bantan Books.
9. Coleman Daniel (1995) Emotional Intelligence, New York Bantan Books
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13. Debono., E (1967): New Think : The Use of lateral thinking in the generation of New ideas, New; Basic Books.
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15. Garden H. (1993) ; Multiple Intelligence : Theory into Practice, New York

16. Hall C.S and Lindzey, G(1998) ; Theories of Personality (3<sup>rd</sup> den) New York; John wiley.
17. Hiilgard E.F., Ernest Richard C. Atkinson and Rita (1971) Introduction to Psychology (5<sup>th</sup> edn.) New York : Harcourt Brace.
18. Hurlock . E.B(1998) : Child Psychology. Tokyo: McGraw Hill.
19. Maslow A.H. (1990) Motivation and Personality (2<sup>nd</sup> edn.) New York : Harper & Row.
20. Morgan and King (1976) ; Introduction to Psychology, Delhi: Tata Megraw Hill
21. Munn N.I., (1997) Introduction to Psychology, Delhi.
22. Nagarajan K. Selvakumar. S.D.,Mani, S and Devaraj.G.(1999): fy;tp estpay ;” Chennai; Ram Publishers.
23. Parr, John and Adiseshiah, W.T.V (1997): Experimental Psychology, Madras allied Publishers.
24. Pasricha. Prem (1976): Guidance and Counselling in Indian Education, New Delhi; NCERT.
25. Petri, H.L (1995); Motivation: Theory and Research (2<sup>nd</sup> edn) Belmont Ca: Wadsworth.
26. Santhanam, S. (1993) : Human Motivation, New York: Halt, Richer & Winston.

## **ED243 INSTRUCTIONAL TECHNOLOGY**

**Credit: 3:0:0**

### **Objectives:**

To enable the students to

- (i) Understand the meaning and significance of Instructional Technology.
- (ii) Relate instructional objectives to Instructional Technology.
- (iii) Assess the relative effectiveness among different instructional development models.

### **Unit I Introduction to Instructional Technology**

Instructional Technology: Meaning, definition, development and scope – ABCD Method of writing instructional objectives – Blooms Taxonomy of Instructional Objectives - Process of Instructional Technology – Procedures involved in need assessment and task assessment.

### **Unit II Models of Instructional Development**

Kemp Model – Instructional Development Institute Model – Criterion Reference Instructional Model – HMD & ISD Model.

### **Unit III Instructional Design and Techniques**

Stages of instructional designs – Instructional designs: objective based, skill-based, computer based and learning style based – Instructional Technology for large groups:

symposium, panel discussion, team teaching and project approach – Instructional technology for small groups. Simulation approach, role-play, buzz group technique, brainstorming and case discussions.

#### **Unit IV Individualized Instructional Techniques**

Individualized Instruction: Meaning and significance – Tutorials, mastery learning & Keller Plan – Programmed instruction: nature, types and development – Development and validation of CBI packages.

#### **Unit V Instructional Evaluation and Remedial Teaching**

Measurement and Evaluation in Education: Meaning and significance – Criterion referenced and norm-referenced test – Innovations in educational evaluation: Choice Based Credit System, Grading and Semester Systems, Question Banking and Computerized test construction and administration – Diagnostic testing and Remedial teaching.

#### **References:**

1. Kumar, K.L. (1997) Educational Technology. New Delhi: New Age International (P) Ltd.
2. Vedanayagam, E.G. (1989) Teaching Technology for College Teachers. New Delhi: Sterling Publishers (P) Ltd.
3. Aggarwal, J.C. (1995) Essential of Educational Technology: Teaching Learning Innovations in Education. Delhi: Vikas Publishing House (P) Ltd.
4. Romiszowski, A.J. (1974) The selection and Use of Instruction: A systems approach. London: Kongen Page.
5. Khirk, Frederick, G. and Gustafron, Kent, (1989) Instructional Technology, New York: CBS College Publishing.
6. Davis, I.K. (1981) Instructional Technique. New York: Mcgraw Hill.
7. Trow, W.C. (1963) Teachers and Technology: New Designs of Learning. USA: Appleton Century Crofts.
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9. Paul, Sattler (1969) History of Instructional Technology.
10. Pillay J.K. (1989) Method of Teaching & Science of Learning, Madurai: Madurai Kamaraj University.
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### **ED244 OPTIONAL I: CONTENT CUM METHODOLOGY OF TEACHING MATHEMATICS II**

**Credit: 3:0:0**

#### **Objectives:**

To enable the student teachers to

1. Understand the Psychology of teaching and learning mathematics.

2. Apply the models of teaching in teaching mathematics
3. understand the pedagogical analysis in mathematics
4. Understand the process of research in mathematics education.

### **Unit I Psychology of Learning Mathematics**

Psychology of learning Mathematics- Formation of mathematical concepts- the ideas of Piaget and Bruner - Factor influencing of learning of Mathematics- Motivation, perception, attitude and aptitude- Divergent thinking in teaching mathematics – Role of Intuition in teaching and Learning Mathematics.

### **Unit II Models of Teaching Mathematics**

Models of teaching mathematics- Families - Concept attainment model, advanced organizing model, Inquiry training model - Enrichment Programmes for the gifted – Backwardness in Learning Mathematics - Remedial Teaching – PLM, PSI and CAI

### **Unit III Pedagogical Analysis in Mathematics**

Pedagogical Analysis of the contents in Mathematics – Meaning – Component and operations involved in the task of pedagogical Analysis - pedagogical Analysis of a few topics / units in the subject mathematics – sets, congruency, area, volume, ratio, proportion and Equations.

### **Unit IV Arousing Interest in Teaching Mathematics**

Arousing and Maintaining Interest in Teaching Mathematics – Role of Puzzles, Riddles and Games in Teaching Mathematics – Meaningful learning in mathematics – Principles of Meaningful learning in mathematics

### **Unit V Research in Mathematics**

Research – Meaning – Characteristics of Research – Needs of research in mathematics – Defects in the Present day Teaching Mathematics - Action Research in Mathematics.

### **References:**

1. Damayanthi Bagyanathan, Teaching or Mathematics (Tamil) Tamilnadu text book society, Madras.
2. Kuppaswami Ayyangar. N. (1964) The teaching of mathematics, A Universal Publication.
3. Parthasarathy(1961), Kanitham Karpithal, The south India saiva siddhanta works.
4. Sundararajan. S.(1960),Theory and practice of teaching of school mathematics, The teacher’s publishing house.
5. NCERT: A Test book of Content- cum- Methodology of Teaching Mathematics, NCERT, New Delhi.
6. Ball, W.W.R. (1908) A short history of mathematics, Cambridge university press.
7. Bell, E. T.(1945), The Development of mathematics, McGraw Hill Book Company.
8. Butter, C.H. & Wren F. L (1965), The teaching of secondary mathematics, McGraw Hill Book Company.

9. NCERT: Improving instruction in mathematics.
10. Kulbir Singh Sidhu (2005), The teaching of mathematics, Sterling publications Pvt., Ltd., New Delhi.
11. Thorndike, R.L. & E. Hagen (1970) *Measurement and Evaluation in Psychology and Education*, New Delhi, Wiley
12. The current mathematics text books in Tamilnadu for standards VI to XII.

## **ED245 OPTIONAL I: CONTENT CUM METHODOLOGY OF TEACHING PHYSICAL SCIENCES II**

**Credit: 3:0:0**

### **Objectives:**

At the end of the course the pre-service teacher will be able to

1. Appreciate the place of Physics and Chemistry in the modern World.
2. Explore activities related to Physical Science content.
3. Construct and standardize diagnostic and aptitude test in Physical Science.
4. Become competent in evaluating Physics and Chemistry books under different curricula.
5. Plan, organize and maintain Higher Secondary level Physical and Chemistry laboratories.

### **Unit I**

The meaning of Science – Different branches of Science – Globalization and Science – Discoveries and Development in Science - Justification for including Physics and Chemistry Separately at Higher Secondary level. Models of Teaching – Preparation of Lesson Plan based on them.

### **Unit II**

Educational Technology in Science Education – Development of programmed instruction materials – Teaching machines – Computer Assisted Instruction - Developing lesson plans using the principles of Piaget, Bruner and Gagne - Activity approach in preparing lesson plans - Power point presentation

### **Unit III**

Evaluating of teaching – Construction of diagnostic test – Construction of aptitude test. Norms testing for scientific attitude and skills objective based testing - Text books – Physics, Chemistry – Evaluation of different types of text books – CBSE, State Board, ICSE, etc.

### **Unit IV**

Organization and maintenance of separate laboratory for Physics and Chemistry – Organization of practical work including preparation of bench solution of Chemistry, etc., Catering the individual difference, Identification and care of the scientifically talented

pupils, Natural Talent Examination, Helping slow and gifted learners. Research in Science Education – Identifying problems in teaching of Science Education

### **Unit V**

Co-Curricular Activities – Organization of Science clubs- Science exhibitions and fairs-fieldtrips and excursions. Science Teacher – Academic and Professional growth – Special qualities – In – Servicing training. Classroom climate, authoritative, Democratic and Laissez faire pattern. Science Libraries values of School Science Library. Knowledge of all the concepts in Physics and Chemistry up to XII Standard

### **References:**

1. Sharma, R.C., Modern Science Teaching, Dhanpat Raj and Sons, 1985.
2. Thurber, Walter A., and Collette Alfred, Teaching Science in Today's Secondary School, Prentice Hall of India Pvt. Ltd., 1964.
3. Brandwein Paul, E., The Gifted as Future Scientist, New York, Earcourt Deace and World Inc., 1955.
4. Summer, W.I. Teaching of Science, Oxford, 1945.
5. UNESCO.1973.Final Report: International Forum on STL for All, UNESCO, Paris.
6. UNESCO, 1979, The UNESCO Source Book, for Science Teaching. UNESCO. Paris.
7. Science Education International, ICASE.
8. Current Science, IISC, Bangalore.
9. School, Science, NCERT, New Delhi.
10. Science Teacher – (Monthly), Editorial and Executive Officers. 1201, Sixteenth St., N.W. Washington.
11. Science Today – (Monthly) Ganga Gritha 3<sup>rd</sup> Floor, 6-d, Nugambakkam High Road, Chennai 600 034.
12. Science Reported – (Monthly) Publications and Information Directorate (CSIR) New Delhi.
13. <http://www.scidu/nsrc.com>

## **ED246 OPTIONAL I: CONTENT CUM METHODOLOGY OF TEACHING BIOLOGICAL SCIENCES II**

**Credit: 3:0:0**

### **Objectives:**

To make the student – teacher to understand

1. Biology Curriculum at the higher secondary and high school level
2. Models of teaching Biology
3. Principles of curriculum construction
4. BSCS, Nuffield and NCERT Curriculum
5. Co-curricular activities
6. Planning, use and maintenance of biology laboratory
7. Professional organization and professional growth of teachers.



### **Unit I Models of Teaching Biology**

Introduction – Definition - Families – Social, Personal, Information and Behavioural - Basic elements of models - Illustration for any three models of teaching

### **Unit II Curriculum Construction**

Definition of curriculum, content, organization - Principles of curriculum construction - Nuffield science teaching project and BSCS - NCERT Curriculum – National curriculum frame work - Types of curriculum – Hidden curriculum, core curriculum, activity curriculum, concrete method and topic method

### **Unit III Co-Curricular Activities**

Importance of co-curricular activities - Field Trips – Importance - Science Club – organization and activities - Science museum - Aquarium, Vivarium, Terrarium

### **Unit IV Science Laboratories**

Introduction - Design of science laboratory for higher secondary - Purchase of apparatus - Entry of apparatus in the registers, laboratory management, Laboratory discipline, Accidents in the laboratory, First aid.

### **Unit V Professional Growth of Biology Teachers**

Introduction - Professional equipment - Qualities of a Biology teacher - Duties and responsibilities of biology teacher - Professional growth and professional organizations

### **References:**

1. Anderson,C and K. Roth (1992) Teaching for meaningful and self regulated learning of science. Advances in Research of Teaching, Vol. 1.J.Brophy, ed Greenwich, Conn:JAI
2. Arons,A.B. (1983). Achieving wider scientific literacy. Daedalus Spring 91-122.
3. Das, R.C (1985). Mastering the Technique of Teaching. Second Edition, San Francisco.
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5. Teaching of Biology.S. Choudhary (2004). APH Publishing Corporation.
6. Jayasree and Digumarti Bhaskara Rao (2004) Discovery Publishing House.
7. Uttam Kumar Singh and A. K. Nayak Science Education- Common Wealth Publishers
8. Teaching of Biology – Veena Pani Pandey (2004) Summit Enterprises.
9. Sood, J.K.(1985)(. Teaching Life Sciences, Kohli Publications, Delhi.
10. Sharma, R.C.: Modern Science Teaching Dhanpat Rai and Sons, Delhi.
11. NCERT (1996). Science for classes IX Aand X, New Delhi.
12. Innovative Science Teaching- Radha Mohan
13. Teaching of Life Science- L.M.Sharma.



## **ED247 OPTIONAL I: CONTENT CUM METHODOLOGY OF TEACHING COMPUTER SCIENCES II**

**Credit: 3:0:0**

### **To enable the student – teachers:**

1. To develop interest and appreciate various pedagogical principles in teaching of computer science.
2. To acquire the knowledge of computer systems.
3. To develop skill in 'C' Language.
4. To develop skill in writing learning packages: MS Power- Point and MS Access.
5. To grasp programmes in Visual Basic.
6. To develop skill in designing web sites using HTML.
7. To understand the concepts of e-learning and latest trends in information technology.

### **Unit I**

Need for planning the computer laboratory. - Special features of computer lab - Settings up the computer lab and infrastructure - Seminar, Symposium, group discussion, panel discussion, workshop techniques - Class room interaction analysis.

### **Unit II**

Types of computers - Anatomy of a computer - System board - Digital versus analog - Central processing unit

### **Unit III**

Fundamentals of C Language - Character set, C constant, C Variables - Operators, Control Structures, Loop structures, Arrays and Structures - Functions, Library functions. Developing simple C Programs

### **Unit IV**

Office automation - MS\_Powerpoint, creating, creating, presentation, Building presentations, Modifying visual elements, animation effects and linking preparing handouts - MS\_Access, Planning and creating tables, Creating and using forms, modifying tables.

### **Unit V**

Introduction to Visual Basic, the VB Screen, the single document interface environment, the help system-tool bars the tool box and custom controls and components. Using the file menu, using the view menu, using the project menu, using the font menu etc, Introduction to HTML: Document, Anchor tags, head and body section, banner, base element, colorful web page, designing the body section, heading paragraph, formatting characters, font tag, images and pictures. e-learning CAI, ICAL, ICAT - Designing CAI Lesson, common CAI frames, Teaching Frames

### **References:**

1. Balaguruswamy, E., Programming in Ansi C, Ed. 2.1, TMH.

2. Flanders, A. Analyzing teacher behavior, Addison Wilesly Publishing Co. USA, 1979.
3. Gary Cornell, Visual Basic 6.0 From the ground up, Tata McGraw Hill, Ed., 2002, [11<sup>th</sup> Reprint].
4. Gine Courter and Annette Marguis, Microsoft office 2000, No experience needed, BPB Publication.
5. Kalkota and Whinston, Frontiers in Electronic commerce, Golgota {publications Pvt., Ltd., New Delhi-2000.
6. Peter Norton, Introduction to computers [4<sup>th</sup> Edition] TATA McGraw Hill.
7. Rick Darnell, et all., HTML 4, Techmedia, New Delhi, 1999.
8. Sanjay Saxena, MS\_Office 2000 for every one, Vikas publishing House Pvt., Ltd., New Delhi, 2001.
9. Thayer, Visual Basic 6.0, Techmedia, New Delhi.

## **ED248 OPTIONAL I: CONTENT CUM METHODOLOGY OF TEACHING ENGLISH II**

**Credit: 3:0:0**

### **Objectives:**

The student teacher

1. Acquires knowledge of different uses of language.
2. develops understanding of the remedial measures and analysis of errors
3. develops skills in creating writing.
4. acquires knowledge of teachers to improve the use of English by self study and Inservice programmes.

### **Unit I**

Language Use – Use of technical terms, presentation skills, short speeches, describing personalities, describing scenery, group discussion Description of pictures, persons, objects and incidents, delivering a speech on a given topic, welcome address, vote of thanks, organizing a debate, interviewing.

### **Unit II**

Remedial English – Identification of students difficulties in learning English and providing suitable remedial measures – diagnosis of students difficulties in learning English – Error analysis.

### **Unit III**

Creative writing in English-collection of newspaper reports on events and functions, preparation of a report for newspapers, writing for journals – seminar, symposium and panel discussion.

### **Unit IV**

Preparation of power point programme – Text book analysis –Current problems in language study.

## Unit V

Teachers of English-Teacher training programmes – Inservice courses – self study – Improvement of Teachers English –Spoken and Written – Doing research for self development

### References:

1. F.T. Wood “ A Remedial English Grammar for Foreign Students”.
2. Allen & Cambell, Teaching English as a Second Language.
3. Palmer, H.E. Teaching of Oral English.
4. Stern, H.H. Fundamental Concepts of Language Teaching.
5. Mukalel, Joseph C. Approaches to English Language Teaching.
6. Jean and David Giles, “Think, Talk and Write”, Longman 1967.
7. Nagaraj, Geetha ELT: Approaches, Methods, Techniques”, Orient Longman,1996.
8. Sachdeva, M.S. “A New Approach to Teaching o English in India’, Prakash Brothers, Ludhiana, 1980
9. Kohli, A.L., ‘The Techniques of Teaching English, Dhanpat & Co. Sons, New Delhi.
10. Brown, Gillian, ‘Listening to spoken English: Applied Linguistics and Language’, Longman, 1977.

## ED249 OPTIONAL I: CONTENT CUM METHODOLOGY OF TEACHING SOCIAL SCIENCES – II

**Credit: 3:0:0**

### Objectives:

1. To understand the curriculum designing
2. To understand the use of community resources
3. To know the recent trends and apply in the classroom activities

### Unit I Curriculum Designing

Selection –organization and radiation of subject content principles to be followed the linear, or spiral and the concentric types of curriculum, logical, Psychological organization – Need for choice of materials in the syllabi - Curriculum revision. Curriculum improvement enriched curriculum – assessment of different school curricula. Homogeneous grouping Dalton play improvised study. Theories influencing selection of materials (a) doctrine of natural taste and interest (b) Cultural epoch theory (c) proceeding from near to remote etc

### Unit II Equipment / Resources

Collateral reading books - Social Sciences club and its activities – social sciences- text book – preparation qualities - Teachers guide - Social Sciences room with globe, maps, models etc - Social Science guest lecturers by eminent social scientists.

### **Unit III A.V. Aids**

Radio, Record player and the cassette recorder - Slide projector, film strips projector, the OHP and sound film projector - TV, VCR - Use the computer in social science education. Need for improvised aids.

### **Unit IV Content**

The subject content prescribed for classes VIII, IX, X, XI, & XII by the T.N. Text book society.

### **Unit V Recent Trends**

Recent trends in social sciences- education – evaluation of social sciences education civic, Political, social economical, geographical, historical points of view - Diagnostic test and remedial teaching

### **References:**

1. Bhattacharya Srinivas and Daiji, D.R (1966) “Teaching Social Studies in India Schools “, Baroda, Acharya Book Depot.
2. Erning C.Arthu and Binding David (1952), “Teaching the Social Studies in Secondary Schools “, New York, McGraw Hill Book Co.,
3. Brimble, L.F.J., Frederick, J. (1950) “ Social Studies and world citizenship”, Bombay: Macmillan & Co.
4. Dray Joan and Jadan (1950), “A Handbook of Social Studies “, London

## **ED250 OPTIONAL II: CONTENT CUM METHODOLOGY OF TEACHING ENGLISH II**

**Credit: 3:0:0**

Objectives:

1. To be familiar with the English sounds
2. To improve the spoken ability in English
3. To develop the skill of reading and writing ability
4. To acquire a working knowledge of various aspects of Modern English Grammar and usage at the Higher Secondary level
5. To develop the reference skills
6. To familiarize with the fundamentals of Linguistics

### **Unit I: Spoken English – Phonetics**

Language and Linguistics

Different organs of speech and their functions –Classification of 44 English sounds- Difference between voice and voiceless sounds - Stress – Word stress and sentence stress (strong forms and weak forms) – Intonation – rhythm.

### **Unit II: Spoken English – Fluency**

Use of conventional Formulae. e.g. greeting, apology, invitation, thanking, etc.

Reading aloud prose passages and poems with clarity  
Describing and interpreting pictures, tables, graphs, maps, etc.  
Dialogues and role play

### **Unit III: Skill of Reading and Writing**

Intensive reading: detailed texts  
Reading for surface meaning, implied meaning and evaluation  
Extensive reading: Novels, short stories and simple books written for laymen  
Writing: Paragraphs, essays, letters, appreciation  
Note taking, note making, developing hints and summary writing

### **Unit IV: Modern English Grammar and usage**

Concord  
The modal verbs  
The noun phrase: MHQ (Modifier, Headword, Qualifier) and verb phrase  
Articles and Prepositions  
Basic sentence patterns  
Relative clauses and a+b+r clauses  
Gerund – Infinitive – participle  
Voice and reported speech  
Sentences: Simple, compound and complex

### **Unit V: Reference, Study and Teaching skill**

Practice in the use of dictionary, Thesaurus and Encyclopedia  
SQ3R - ELT through drama, newspaper, cartoon and multimedia  
Library: Bibliography and annotated bibliography cards – uses

### **Reference Books:**

1. Ahuja, G.C. and Pramila Ahuja, 'How to Increase Reading Speed', Sterling Publishers, 1994.
2. Brown, Gillian, 'Listening to Spoken English: Applied Linguistics and Language', Longman, 1977
3. Brunifit, E.J. and K. Johnson, 'The Communicative Approach to Language Teaching', OUP, 1979
4. David, E., 'Classroom Techniques – Foreign Languages and English as a Second Language', New York, Harcourt Brace, 1977
5. Els, Theo Van et al, 'Applied Linguistics and Learning and Teaching of Foreign Languages', Edmond Arnolds, 1984
6. Geoffrey, Bernard, 'Better Spoken English', McMillan & Co., London, 1969
7. Grellet, Françoise, 'Developing Reading Skills, CUP, 1986
8. Hornby, A.S., 'Guide to Patterns and Usage in English', OUP, 1976
9. Huddleston, Rodney, 'English Grammar: An Outline', CUP, 1996
10. Jean and David Giles, 'Think, Talk and Write', Longman, 1967
11. Johnson, K., 'Communicative Syllabus Design and Methodology', Oxford, Pergamon Press, 1983

12. Kohli, A.L., 'The Techniques of Teaching English, Dhanpat & Co. Sons, New Delhi.
13. Lawrence, M., 'Writing as a Thinking Process', New York, NCTE, 1975
14. McCarthy, Michael and Felicity O'Dell, 'English Vocabulary in Use', CUP, 1994
15. Nagaraj, Geetha, 'ELT: Approaches, Methods, Techniques', Orient Longman, 1996.
16. Richard, Jack, C., 'The Language Teaching Matrix', CUP
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18. Seely, John, 'The Oxford Guide to Writing and Speaking', OUP, 1988

## **ED251 EDUCATIONAL GUIDANCE AND COUNSELLING**

**Credit: 3:0:0**

### **Objectives:**

At the end of the course the student teacher will be able to

- 1) Recognize the meaning, nature and need of Guidance services and Counseling in schools.
- 2) Acquire the necessary knowledge about the Guidance services, qualities of the counselor and his functional competencies.
- 3) Describe the different evaluative techniques to collect information about the individuals for effective guidance.
- 4) Differentiate guidance and counseling and explain the professional preparation of a counselor.
- 5) Interpret the values of modern trends in guidance movement.

### **Unit I Guidance: Conceptual Aspects**

Aim of guidance – Need for guidance – Meaning and Definition of guidance – Modern trends in guidance – Vocational, guidance, Educational guidance, Personal guidance, child guidance clinics, and Specific areas of guidance.

### **Unit II Guidance Strategies and Counseling Techniques**

Meaning of counselor – Conditions essential for counseling – Types of counseling – client-centered, Directive, contrast and comparison – Group guidance and group counseling – Guidance in groups, group counseling, case conference procedures, multiple counseling.

### **Unit III Individual's Evaluation for Effective Guidance**

The concept of Evaluation – Informal study Approaches – Observation, Anecdotal records, Autobiographical Sketches, Sociograms and teacher-pupil interviews – Measurement of general and special abilities – Intelligence, Differential aptitude and achievement test – Measurement of personality traits, Projective technique and situational tests – The school testing programme – Individual testing, group testing, construction of case history

#### **Unit IV Counselling Process**

Counselling: Preparation, process and interactions – Variables affecting counseling process – Counselling interview – Interview technique in counseling – Counselor & Counseee relationship – Degree of lead, Silence, Relationship techniques, sharing of experience and resistance.

#### **Unit V Status of Guidance Movement in India**

Counselling Movement in modern times – Guidance Movement after Independence – Role of Government of India and Universities – Present Status of Counselling.

#### **References:**

1. Shrivastava, K.K (2004), Principles of Guidance and Counselling 2<sup>nd</sup> Ed. New Delhi: Kanishka Publishers.
2. Narayana Rao, S (1991), Counselling and Guidance : Tata MC Graw Hill Publishing Company Limited.
3. Kochhar, S.K (1984), Educational and Vocational Guidance in Secondary Schools New Delhi : Sterling Publisher.
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6. Bhatnagar, Asha and Gupta, Nirmala. (1999), Guidance and Counselling Vol. I and II. New Delhi, Vikas publishing House (P) Ltd.
7. Myrick, R.D. (1993) Developmental Guidance and Counselling : A Practical Approach 92<sup>nd</sup> Ed ) Mineapoils, M.N. Educational Media Corp.
8. Ohlen, Merle M. (1974) Guidance Services in the Modern School. 2<sup>nd</sup> Ed. New York: Harcourt Brace Jovanovich, Inc.
9. Pasricha, Prem (1976) Guidance and Counselling in Education. New Delhi, NCERT.

### **ED252 EDUCATIONAL MANAGEMENT**

**Credit: 3:0:0**

#### **Objectives:**

The Student Teacher:

- (i) Acquires knowledge of the terms and concepts needs in Educational Management.
- (ii) Understands the principles, functions and organization of Educational management.
- (iii) Applies the knowledge in analyzing the roles and supervision method of the present heads of the educational institutions
- (iv) Develops skill in preparing document for effective educational administration.
- (v) Develops interest in supervision and effective control of educational institutions



- (vi) Develops a desirable positive attitude towards the implementation of educational management

### **Unit I**

Management – Administration - Meaning, definitions and difference - Functions of management - Educational management - Meaning functions. Theories of management - Principles of good management - Developmental and maintenance

### **Unit II**

Management –Leadership –Styles-Role of Head of the Educational institution in management - Educational Supervision –Meaning –Need-Types aims-Difference between Supervision and inspection-Methods of Supervision.

### **Unit III**

Roles of Teachers - Heads of the institution - inspectors of Schools - DEOs and CEOs on Educational Management - Role of State and Central Government - UGC, NCERT, SCERT on Educational Administration.

### **Unit IV**

Management of Curricular and Co-Curricular activities- Financial management principles and practices - School finance –Planning - School – Community partnership.

### **Unit V**

Issues in Educational Management – centralization and decentralization autonomy and responsibilities - academic freedom - students participation in administration - self financing and aided institutions – Total Quality Management (TQM)

### **References:**

1. Cannobell, Coorbally and Ramasayer , Introduction to Educational Administration, Boson Allan and Bacon Inc
2. Education Commission Report 1964-66
3. Ghosh, Prasanta K., Office management, Sultan Chand Publisher
4. Haggett Albert , Practical School Administration II Linois, Garrand Press
5. Kochar S.K, Successful Supervision and Inspection, New Delhi Sterling Publishers
6. Kocher S.K, Pivotal issues in Indian Education, New Delhi, Sterling publisher.
7. Kocher S.K, Secondary School Administration, New Delhi, Sterling publisher.
8. Mamoria, CB and Udai Pareck, Personnel management (Management of Human Resources) Banglore, Himalaya publishing house.
9. Mathur S.S, Educational Administration, New Delhi, Amide publisher.
10. Mrityunjoy Banerjee., Business Administration Principles and Techniques., London Asia publishing house
11. Mort Paul R, Principles of School Administration, McGrawHil, publishers.
12. Rai B.C, School Organization and management, Lucknow Prakshan Kendra publisher.
13. Safaya R.N, Development planning and Problems of Indian Education, Delhi, Dhanpat Rai & Sons.

14. Sindhu K.S , School Organization and Administration , Jalandhar City international Publishers.
15. William Stally .W, Educational Administration of Secondary Schools, Holf Rinehart publisher.

## **ED253 EDUCATIONAL MEASUREMENT AND EVALUATION**

**Credit: 3:0:0**

### **Objectives:**

The Student Teacher:

- (i) Acquires knowledge of the concepts and terms used in educational evaluation.
- (ii) Understands the types and procedure of educational evaluation.
- (iii) Applies the knowledge in construction and measurement of education outcomes.
- (iv) Develops skill in the construction of test and interpretation of test scores.
- (v) Develops interest in the educational evaluation.
- (vi) Develops a desirable positive attitude towards the study of educational evaluation.

### **Unit I**

Measurement - Evaluation – Meaning - Definition Difference - Function of evaluation – Types of evaluation – formative, summative, criterion, referenced – Norm referenced.

### **Unit II**

Objectives – Learning experiences and Evaluation Meaning and relationship – taxonomies of educational objectives.

### **Unit III**

Testing procedure – Oral, written, performance – Measuring instruments - test, observation schedule, rating scales, check lists, cumulative records, anecdotal records, projective techniques – Achievement tests, aptitude test, attitude test, diagnostic test, prognostic test and their purposes.

### **Unit IV**

Achievement test – Meaning – Types of test terms -objective type, short answer type and essay type – Characteristics of test – Objectivity, reliability and validity – Test construction procedures –Standardization.

### **Unit V**

Interpretation of test results - Organization of data – Frequency distribution – Calculation of averages, mean, median and mode – derivations –Normal distribution – skewness, kurtosis –Graphical representation of data -Co-efficient of correlation.

### **References:**

1. Anastasi, Anne, Psychological testing, London, the Macmillan company.

2. Adams, G. S, Measurement and Evaluation in education, Psychological of guidebook, New Delhi, Holt, Rinehart & winston.
3. Bhatia K.K , Measurement and Evaluation in Education, Jalundur, Prakash brothers.
4. Bean K.L , Construction of Educational and personal Tests, New York , McGraw Hill company.
5. Bloom Benjamin S , Taxonomy of Educational objectives, Hand book I New York, Longman green and Co.
6. Best John W, Research in Education, New Delhi, Prentice Hall of India.
7. Downie N.M, Fundamentals of measurement, New York, Oxford University press.
8. Ebel, Robert L, Measuring Educational Achievement, New Delhi, Prentice Hall India Pvt Ltd.
9. Karathwohl, Bloom ,Taxonomy of Educational objectives, hand book II The affective Domin, New York,. Macmillan Company.
10. Gronlund Norman E , Measurement and Evaluation of Teaching, New York, Macmillan Company.
11. Muthumanickam. R , Educational objectives for Effective planning and teaching, Chidambaram, Cyberland publisher.
12. N.C.E.R.T, The Concept of Evaluation in Educational, New Delhi, N.C.E.R.T.
13. Ornstein, Allen C. and Francis P. Hunkins, Curriculum, Foundations, Principles and issues, New Jersey, Prentice Hall
14. Srivastava , H.S and J.P shourie, Instructional objectives of School Subjects, New Delhi, NCERT Publication.
15. Tucknan, Bruce W Evaluating instructional programs, Boston, Allyn and Bacon.

### **ED254 ENVIRONMENTAL EDUCATION**

**Credit: 3:0:0**

**Objectives:**

**The student teachers:**

1. To acquire the knowledge of Environmental Education and its need.
2. To understand the concept and importance of Environmental Education.
3. To provide the fundamentals of Environmental Education.
4. To develop a sense of awareness of different kinds of environmental pollution and problems.
5. To understand the causes of pollution.
6. To grasp different types of environmental crisis and their control.
7. To conserve the natural resources and bio-diversity.
8. To appreciate the guidelines formulated by various conferences and commissions.
9. To develop a sense of responsibility about the role of teachers in fostering the idea of learning to live in harmony with nature.

#### **Unit I**

Evolution of Environmental Education - Its definition, objectives and significance

Nature of Environmental Education - Need of Environmental Education

## **Unit II**

Types of Environmental pollution: social pollution, Marine Pollution, Thermal pollution, nuclear pollution, etc - Causes and effects of pollution - Hazards due to human activity - Green – house effect (Global warming) and environmental threat.

## **Unit III**

Bio-diversity - Conservation of natural resources - Classification of resources - Environmental Management and Sustainable Development - Green Bench - Creating community awareness.

## **Unit IV**

Environmental Movements in India - International Conferences - Environmental Protection Acts - Role of UNESCO - Environmental Education and Mass Media Programmes

## **Unit V**

Salient features of Environmental awareness through Teaching – Learning Strategies- Role of school in environmental conservation and sustainable development. Teacher's role in promoting the Environmental Education.

## **References:**

1. Anil Kumar De and Arnab Kumar De, **“Environmental Education”**; New Age International Pvt. Ltd., Publishers, New Delhi, 2004.
2. Anil Kumar De and Arnab Kumar De, **“Environmental Studies”**, New Age International Pvt. Ltd., Publishers, New Delhi, 2001.
3. Kaayar, V.S., **“Environmental Concerns, Depleting Resources and Sustainable Development”**, Pointer Publishers, Jaipur, 1997.
4. Kumar, R., **“Environmental Pollution and Health Hazards in India”**, Ashish Publishing House, New Delhi.
5. Kumarasamy, K., Alagappa Moses, A and Vasanthi, M., **“Environmental Studies, Publication Division”**, Bharathidasan University, Trichy, 2004.
6. Mitra, A.K., **“Urban Environmental in Crisis”**, New Age International Pvt. Ltd., Publishers, New Delhi, 2000.
7. N.C.E.R.T. **“Environmental Studies”**: Teachers’ Guide, 1980.
8. Panneenselvam A. and Mohana Ramakrishnan., **“Environmental Sciences Education”**, Sterling Publishers Pvt. Ltd., New Delhi, 2003.
9. Saxena, A.R., **“Environmental Education”**, Bhargava Book House, Agra.
10. Sharma, R.G. **“Environmental Education”**, Metropolitan Book Co. Pvt. Ltd., New Delhi, 1986.
11. UNESCO – UNEP, **“International Environmental Education”**, Programme, 1990.
12. World Commission on Environmental and Development
13. Our Common Future, o.u.p., 1989.

## **ED255 WRITING FOR EDUCATIONAL MEDIA**

**Credit: 3:0:0**

### **Objectives:**

At the end of the course, the student will be able to

1. Understand the principles, characteristics and techniques of writing for educational media.
2. Write a scripting for different media
3. Understand the law and ethics of writing for educational media and to make copy right for the product.

### **Unit I Introduction to Scriptwriting for Educational Media**

Meaning, characteristics and techniques of scripting for educational media – basic tools and styles of writing – sources of writing: historical information, personal sources, interviewing and observations – Types of writing: print, broadcasting and information technology

### **Unit II Writing for Print Media**

Meaning, types and characteristics of print media – story board, features – editorial – news release – copy writing – commercials – magazines – book review – play writing - Journals.

### **Unit III Writing for Electronic Media**

Meaning, types and characteristics of electronic media – scripting for Radio/audio and video/television and film – news writing – play and serial writing – writing for multimedia and WBI packages – digital format and computer software.

### **Unit IV Writing for Self-Instructional Packages**

Meaning, types and characteristics of self-instructional package – writing for Programmed instruction, CBI, VAI, Multimedia, Web Based Instruction, Edusat programmes.

### **Unit V Law & Ethics in Writing for Educational Media**

Ethical and legal considerations in writing – amendments and defamation – copy rights and trade mark – Advertising and Broadcasting regulations – Employment possibilities in Print, Broadcast, Advertising and Information Technology.

### **References:**

1. Writing for Media – Sunny Thomas
2. Writing for Mass Media – Glenstovall
3. Understanding Mass Communication – Defieur
4. Management of Electronic Media – Alan B. Aibarran

**ED256 TEACHING COMPETENCY I (Practical)**

**Credits: 0:0:3**

**School Teaching Practice for 30 working days in their optional I at various Schools.**

1. Observation Classes – 10
2. Lesson Plans - 20
3. Preparation and Use of Instructional Aids

**ED257 TEACHING COMPETENCY II (Practical)**

**Credits: 0:0:3**

**School Teaching Practice for 30 working days in their optional II at various Schools**

1. Observation Classes – 10
2. Lesson Plans - 20
3. Preparation and Use of Instructional Aids

**ED258 MICRO TEACHING I (Record)**

**Credits: 0:0:1**

The B.Ed. trainees should practice any five of the teaching skills from the followings:

1. Skill of Induction
2. Questioning skills (all skills related to asking question)
3. Using Blackboard
4. Skill of Reinforcement
5. Skill of Explanation
6. Skill of Stimulus Variation
7. Skill of Closure

And the trainees should record the remarks of the observers.

**ED259 MICRO TEACHING II (Record)**

**Credits: 0:0:1**

The B.Ed. trainees should practice any five of the teaching skills from the followings:

1. Skill of Induction
2. Questioning skills (all skills related to asking question)
3. Using Blackboard
4. Skill of Reinforcement
5. Skill of Explanation
6. Skill of Stimulus Variation

## 7. Skill of Closure

And the trainees should record the remarks of the observers.

### **ED260 CONSTRUCTIONS OF TESTS I (Record)**

**Credits: 0:0:1**

1. Evaluation
  - ❖ Meaning, Definition and Types
  - ❖ Test and Measurement
  - ❖ Types of Test
  - ❖ Characteristics of Test
2. Diagnostic Test
  - ❖ Preparation
  - ❖ Administration
  - ❖ Error Analysis
  - ❖ Interpretation
  - ❖ Remedial Teaching
3. Achievement Test
  - ❖ Weightage of Objectives, Content and Questions
  - ❖ Blue Print
  - ❖ Question Paper
  - ❖ Scoring Procedure
  - ❖ Key
  - ❖ Standardization of test
4. Application of Statistics
  - ❖ Measures of Central Tendency Mean, Median, Mode
  - ❖ Measures of Dispersion – Standard Deviation, Quartile Deviation
  - ❖ Rank Correlation
5. Graphical Representation
  - ❖ Frequency Curve
  - ❖ Frequency Polygon
  - ❖ Histogram
  - ❖ Ogive Curve

### **ED261 CONSTRUCTIONS OF TESTS II (Record)**

**Credits: 0:0:1**

1. Evaluation
  - ❖ Meaning, Definition and Types
  - ❖ Test and Measurement



- ❖ Types of Test
  - ❖ Characteristics of Test
2. Diagnostic Test
    - ❖ Preparation
    - ❖ Administration
    - ❖ Error Analysis
    - ❖ Interpretation
    - ❖ Remedial Teaching
  3. Achievement Test
    - ❖ Weightage of Objectives, Content and Questions
    - ❖ Blue Print
    - ❖ Question Paper
    - ❖ Scoring Procedure
    - ❖ Key
    - ❖ Standardization of test
  4. Application of Statistics
    - ❖ Measures of Central Tendency Mean, Median, Mode
    - ❖ Measures of Dispersion – Standard Deviation, Quartile Deviation
    - ❖ Rank Correlation
  5. Graphical Representation
    - ❖ Frequency Curve
    - ❖ Frequency Polygon
    - ❖ Histogram
    - ❖ Ogive Curve

### **ED262 PSYCHOLOGY PRACTICAL (Record)**

**Credits: 0:0:1**

The B.Ed. trainees should carry out any six practical works from the followings:

1. Motor dexterity
2. Finger dexterity
3. Attitude Tests
4. Mirror drawing
5. Pass along test
6. Personality tests
7. Raven's non-verbal Intelligence
8. Aptitude Tests
9. Value Orientation scales
10. Emotional Intelligence Scales
11. Creativity Test

12. Interest inventory
13. Level of Aspiration
14. Adjustment inventory

### **ED263 CASE STUDY AND ACTION RESEARCH (Record)**

**Credits: 0:0:1**

**Objectives:**

1. To acquire the knowledge of research
2. To understand the process of case study and action research
3. To apply the case study and action research to the improvement of students and school

**Unit I**

Research – Meaning – Characteristics of research – Qualities of a Researcher - Types of Research – Methods of Research – Case study – Steps for doing case study.

**Unit II**

Action Research – Goals – Features – Steps in Action Research – Use of Action Research – Limitations

**Case study**

Each 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.

**Action Research**

Each student teacher should conduct an action research on any of the problem of the teaching practice school and submit the record of the same in the prescribed form.

### **ED264 SCHOOL SURVEY (Record)**

**Credits: 0:0:1**

Each student teacher should visit one State board school, one International School, one special school. Also trainees should record the following steps.

- a. Introduction about the school
- b. Infrastructural facilities
- c. Instructional facilities
- d. Human resources
- e. Organizational chart
- f. Services to the society by the school & conclusion

## **ED265 PHYSICAL EDUCATION AND HEALTH EDUCATION (Record)**

**Credits: 0:0:1**

### **Objectives:**

1. To acquire the knowledge of Physical education
2. To apply the knowledge of first aids in real life situation
3. To conduct Physical Education classes for the school students

### **Unit I**

Physical Education – Aims & Objectives - Need for Physical Education - Conduction School Assembly - Qualities of any Sportsman and appreciation on him/her

### **Unit II**

Major and Minor Games – Intramural competition – Fixtures – organization and conduct – Health and Safety Education - Yoga and Meditation

### **Unit III**

Anatomical and Physiological basis of health – Food and Nutrition – Diet, Vitamins – Deficiency diseases – First aid

### **Practicum:**

- ❖ Each student should prepare 5 physical education lesson plans and 2 health education lesson plans
- ❖ Each student should submit 5 physical education observations and 2 health education observations
- ❖ Each student should submit a drawing note which includes courts of basket ball, volley ball, Tennis, oval of cricket, field of foot ball, and hockey
- ❖ Each student should submit a picture album containing pictures connected with physical and health education.

## **ED266 COMMUNITY SERVICE (SUPW and Arts & Craft) (Record)**

**Credits 0:0:1**

1. SUPW: Preparation of Ink, Soap, Phenol and Chalk
2. Arts: Flower making, Bouquet, Interior decoration, Wall hanger and Development of display boards.
3. Craft: Embroidery works, prepare nylon wire bags, envelop making, Tray and File making.

## **ED267 CAMP ACTIVITIES AND EDUCATIONAL TOUR (Record)**

**Credits: 0:0:1**

- ❖ Any society related camp should be conducted for 3 working days at near by village. Also they should record the activities of the camp in a prescribed form.
- ❖ Educational tour should be for 3 working days to visit the places of educational important. Also the trainees should follow the following steps for the record
  - a. Planning
  - b. Organizing
  - c. Financing
  - d. Executing
  - e. Evaluating the tour

## **ED268 EDUCATIONAL TECHNOLOGY LAB (Record)**

**Credits: 0:0:1**

The B.Ed. trainees should carry out any six practical works from the followings and submit a Record note:

1. Theoretical outline of Educational Technology (Bloom's taxonomy of educational objectives)
2. Preparation of Information Technology Album
3. Create one Power point presentation in CD on the optional subject
4. Prepare one Audio tape on subject concern
5. Prepare one Learning Module in printed format
6. Prepare 20 number of slides on the subject concern
7. Identify a website and make a critical analysis in terms of content, design and technical features and make a note of it.
8. Operation of Digital moving camera and make a note about the parts and functions of it.
9. Operations of educational Telescope and make a note about the parts and functions of it.
10. Develop a Computer Assisted Instruction (CAI)
11. Developing Charts & film strips
12. Technological improvisation in models of teaching. (make a note about the applications of technology in Education)

## **ED269 OPTIONAL I: CONTENT CUM METHODOLOGY OF TEACHING COMMERCE I**

**Credit: 3:0:0**

### **Objectives:**

1. To help the teacher trainees to acquire knowledge of nature and scope of Commerce and Accountancy.
2. To understand the aims and objectives of teaching commerce and accountancy
3. To develop micro teaching skills and understand the different methods, skills and techniques of teaching.
4. To know the preparation and use of audio visual aids in commerce teaching.
5. To implement the methods of evaluation, construct and administer the achievement and diagnostic tests.

### **Unit – I commerce education – an introduction:**

A brief survey of the development of commerce education-Nature of commerce and Accountancy with special reference to higher secondary school curriculum – development of commerce curriculum in Tamil Nadu- practical ,social, cultural ,moral, disciplinary and vocational values of teaching commerce and accountancy.-Need for commerce and accountancy education-importance.

### **Unit – II aims and objectives of teaching commerce and accountancy:**

Aims and Objectives of teaching commerce and accountancy subjects – base for the development of the Objectives through the appropriate learning experience-Bloom's Taxonomy of educational Objectives- classroom objectives of teaching commerce general instructional objectives and specific learning outcomes relating to the objective affective and psychomotor domain.-cognitive aspect like attention, perception and concept formation with reference to teaching of commerce and accountancy.

### **Unit – III Micro Teaching and Methods of Teaching Commerce and Accountancy:**

Micro and Macro teaching – Need for micro teaching – components – skill of explaining, stimulus variation, blackboard writing, reinforcement, illustrating with examples-advantages of micro teaching.

Traditional methods – lecture, demonstration, Heuristic, Story telling, Biographic and project method. Modern methods-team teaching, seminar, symposium, workshop, debate, panel discussion and group discussion.

### **Unit – IV Audio Visual Aids**

Instructional Aids – Need ,Uses and Kinds – Audio Visual Aids and their merits-Visual Aids –Text books, Black board, Charts, Models, Flannel board, Magnetic Board, Collected forms and statements from bank ,LIC and Other financial Institutions-Projective Aids;Film-Strip,Film,OHP,Projector,Epidiastcope,Micro-Projector-Audio-Aids:Tape-Recorder,Gramophone plates-Field- trips, Excursions- organizing, commerce club, Museum, Exhibition, School co- operative society etc.,

## **Unit- V Evaluation**

Evaluation- concept – measurement and evaluation-types of Evaluation –formative, Summative, Norm-reference and criterion referenced. Tests-achievement and Diagnostic-blue print-construction, administration, evaluation and interpretation- item analysis-Measures of central tendency. Measures of dispersion, correlation and rank correlation co- efficient.

### **Reference:**

1. Bruce Joyce and Marsha Weil.(1985).Models of teaching .New Delhi: Prentice Hall of India
2. Dutt,Suresh.(1988). Curriculum and Child development. India: Bhargava, Publishing company.
3. Kaushik,Vijaya Kumari(1997).Essentials of teaching and learning. India : Bhargava, Publishing company.
4. Singh.L.C and Sharma R.D.,(1987) Micro teaching – Theory and practice . India: Bhargava,Publishing company.
5. Khan.M.S The teaching of commerce , New Delhi: Sterling.
6. Noden and Haydon Principles and problems of business Education. Cincinnatti: South Western Publishing company.
7. Bhushan Y.K (1987),”Fundamentals of business organization and management” .Sultan Chand and company.

## **ED270 OPTIONAL I: CONTENT CUM METHODOLOGY OF TEACHING COMMERCE II**

**Credit: 4:0:0**

### **Objectives:**

1. To acquire and develop the use of various communication techniques in classroom teaching and recent technological innovations in communication system.
2. To develop the competency in teaching accountancy in special areas
3. To enable student teachers to understand the different types of business enterprises.
4. To give the knowledge of models of teaching and classroom climate.
5. To understand the knowledge of qualities of a good teacher and evaluating teaching.

### **Unit – I Approaches and Systems Of Communication**

Communication-principles and barriers of communication – principles of modern communication informal and nonformal learning situation – various stages in modern communication system – mass-media approaches to education – different media-multi-media approach in learning – its need and scope – uses if internet in communication – E-commerce and the impact of information technology.

### **Unit – II Modern Accounting System**

Preparation of cash book- simple, double and triple column cash book – teaching of contra entry – explaining skill involved in Bank Reconciliation Statement – arranging items in Trail Balance and getting tallied – Preparing final account – Trading, profit and loss account and balance sheet – methodology of teaching final a/cs – teaching difficult items in accounts namely, adjustment entries.

### **Unit - III Areas of Trade and Industry**

Major divisions of Commerce – Trade, Transport, warehouse, Bank, Insurance and advertisement – Trade – wholesale and retail – middleman and market functions, departmental and multiple shops – co-operative – consumer shops – fair price shops – hire purchase and installment system. Transport and warehouse – Road, rail, air and water transport – railway receipt – way bill – container service – classification warehousing – warehouse documents. Banking and insurance – banking services – major activities of commercial banks. Co-op banks – lending schemes of nationalized banks – RBI – Travelers Cheques and Hundies.

### **Unit - IV Methods of Teaching**

Individualized instruction methods – supervised study – use of source materials – programmed learning – linear and branching programmes – case studies – their applicability to the teaching of commerce and accountancy. Computer Aided Instruction (CAI) – Role of teachers in individualized instruction. Teaching for concept mapping and cooperative learning.

### **Unit – V Evaluation of Commerce and Accountancy Teachers**

Teacher effectiveness – classroom climate – Teacher dominated pattern – democratic pattern – lassie-faire pattern – significance of the classroom climate – Evaluating Teaching – need, model, use. Evaluation of teachers – by pupils, self-evaluation, rating by superiors and colleagues. Flanders Interaction Analysis Category system.

### **Reference:**

1. Tonne.H.A.(1960). Principles of Business Education, New York : Mc.Graw Hill Book col. Gregg Division. Company.
2. Green.H.L. Activities Hand Book for Business Teachers. Mc Graw Hill Book Co.,
3. Venkataiah.N.(1996) Educational Technology, India: Bhargava, Pub.
4. Sampath K. and etc., (1992) Introduction to Educational Technology, New Delhi; Sterling Publishers Pvt., Ltd.,
5. Vedanayagam.E.G.(1994) Teaching Technology for College Teachers, New Delhi: Sterling Publishers Pvt., Ltd.,

## **ED301 PHILOSOPHICAL AND SOCIOLOGICAL FOUNDATIONS OF EDUCATION**

**Credit: 4:0:0**



**Objectives:**

The student will understand philosophical enquiry as a basis of all educational endeavors.

1. The student will critically appraise the contributions made by prominent educational thinkers to Indian and Western.
2. The student will indulge in independent reflection on philosophical basis of major educational issues in the global context.
3. The student will understand the concept and process of social organization, social stratification and institution.
4. The student will understand the relationship between culture, society and education.

**Unit I: Schools of Philosophy**

Philosophy of Education: Meaning and Significance – Indian Philosophy: Sankhya, Vedanta, Buddhism, Jainism, Islamic traditions with special reference to Epistemology, Axiology and Metaphysics and their educational implications – Western: Idealism, Realism, Naturalism, Pragmatism, Existentialism, Marxism with special reference to Epistemology, Axiology and Metaphysics and their educational implications – Modern philosophy: Analysis, Logical analysis, Logical Empiricism and positive relativism (Morris L. Prigge).

**Unit II: Contributions of Philosophers**

Contributions of Indian Philosophers: Vivekananda, Tagore, Mahatma Gandhi and Aurobindo, Radhakrishnan - Contributions of Western Philosophers: Plato, Aristotle, John Dewey and Froebel, Paulo Freire, Montessori.

**Unit III: Indian Constitution for Education**

Education and the Indian Constitution – Articles related with education- Human rights education – National Values as enshrined in the Indian Constitution and their empiricism and positive relativism.

**Unit IV: Education & Sociology**

Sociology - Meaning and Nature of Educational Sociology and Sociology of Education. Relationship between Sociology and Education - Education as a social sub system. Education and the home- Education and the community- Education and modernization - Education and politics- Education and religion - Education and culture - Education and democracy.

**Unit V: Education for Indian Social System**

Social change- Social stratification- social mobility - social equity- equality of educational opportunities- constraints on social change in India (caste, ethnicity, class, language, religion, regionalism) – Education of socially and economically disadvantaged sections of the society-SC/ST, women and rural population.

**References:**

1. Arnstine.D. Philosophy of Education: Learning and Schooling, New York, Harper and Row, 1967.

2. Bruhacher, J.S. A history of Problems of Education London, Mc Graw Hill, 1974.
3. Mc Clellan. J.E. Philosophy of Education, New Jersey , Prentice Hill Inc., 1971.
4. Lucas J.C. Our Western Educational Heritage New York, Macmillan, 1972.
5. Roman. F.W. The New Education in Europe London, Routledge and Sons, 1930.
6. Paratte. R. Ideology and Education New York, Mcday, 1977.
7. Monroe, Paul . Encyclopedia of Philosophy of Education, New Delhi, Cosmo Publications, 2001.
8. Sharma, Ram Nath. Text Book of Educational Philosophy, New Delhi, Kanishka Publications, 2000.
9. Sharma Y.K. Sociological Philosophy of Education, New Delhi, Kanishka Publishers, 2003.

### **ED302 PSYCHOLOGY OF LEARNING & COMMUNICATION**

**Credit: 4:0:0**

**Objectives:**

At the end of the course, the student will be able to

1. Understand the meaning, principles and methods of psychology, especially educational psychology.
2. Understand the principles and process of learning and the factors affecting learning process.
3. Understand the nature and scope of Psychological approach to communication.

**Unit I Introduction to Educational Psychology**

Nature, Scope and Methods of Educational Psychology – Schools of Psychology – Emerging areas of educational psychology – Bloom’s Taxonomy of Educational Objectives.

**Unit ii Psychology of Learning**

Learning: concepts, meaning and factors affecting learning – Approaches to Learning: Behaviorism, Cognitivism and Constructivism – Types of learning: Conditioning, Problem solving and information processing.

**Unit III Psychology of Communication**

Meaning and process of communication – Types of Communication: interpersonal and Mass communication, Verbal and non-verbal communication – Language and Communication – classroom communication – Role of Educational Media for effective communication – Selection of Media.

**Unit IV Programmed Instruction for Software Production**

Meaning, concept, principles characteristics and types of programmed instruction – Guidelines for programmed instruction – Stages of programmed instruction – evaluation of programmed instruction – Computer application in programmed instruction and psychological testing.

## **Unit V Psychology of Instructional Designing**

Education as a system – Systems Technology – Principles of Learning – Instructional designing and analysis – Glaser and Silvern’s Models – Task Description and Analysis – Role of electronic media in individualized instruction.

### **References:**

1. Anderson, R.C. Faust, G.W. (1973), Educational Psychology, London: N.Y. London Harper.
2. Bernard Harold, Psychology of learning and teaching McGraw Hill, New York.
3. Fredrick G. knirk & Kent L. Gustafson – Instructional Technology: A Systematic Approach to Education.
4. Bower, G. and Hilghard E.A. (1981), Theories of Learning (5th Edn.) New York: Prentice Hall, Engliwood Cliffs.
5. Cronbach L.J, Educational Psychology. New York: Harcour Brace and Co.
6. Crow L.D. and Crow A, Educational Psychology Eurasia Pub. House, New Delhi, 1973.
7. Dececco J.P. The Psychology of learning and Instruction. New York: Prentice Hall of India.
8. Freeman F.S. Psychological Testing. Holt, Rinehart, New York, 1962.
9. Garden R. Gross. The Psychology of learning, Oxford: Pergamon Press.
10. Robert B. Kozma, Lawrence W. Belle & George W. Williams – Instructional Techniques in Higher Education.
11. Davis, I.K. – Instructional Technique.
12. Hurlock E, Developmental Psychology. New Delhi: Tata McGraw Hill.
13. McShane, J. (1991), Cognitive Development: An Information Processing Approach, Oxford: Basil Blackwell.
14. Motilal Sharma (Ed.) – Systems Approach: Its Application in Education.
15. Rothstein, P.R. (1990), Educational Psychology, New York: McGraw Hills.
16. Skinner C.F., Educational Psychology. New Delhi: Prentice Hall of India
17. John C., Zacharis & Coleman C. Bender – Speech Communication: A Rational Approach.
18. Albert Silverstein (Ed.) – Human Communication: Theoretical Explorations.
19. K.L. Kumar – Educational Technology
20. J.C. Aggarwal – Essentials of Educational Technology: Teaching Learning Innovations in Education.

## **ED303 METHODOLOGY OF EDUCATIONAL RESEARCH AND STATISTICS**

**Credit: 4:0:0**

### **Objectives:**

1. To acquaint the student with the methods used for locating problem areas and research problems.
2. To familiarize the students with the common tools of research and assess their efficiency.
3. To help the student use statistical techniques and designs in educational research.

4. To familiarize the student with the standard conventions used in and presenting the research.

### **Unit I: Introduction to Educational Research**

Educational Research: Meaning, Need and Scope – Areas of Educational Research – Classification of Research: Fundamental research, Applied research and Action research – Qualities of a good researcher.

### **Unit II: Research Problem & Hypothesis**

Selection of research problem – Source and Criteria – Statement of the problem – Survey of related literature and its importance – Hypothesis: Meaning, Characteristics, Types, Formulation and Testing.

### **Unit III: Research Design & Sampling**

Methods of Research: Normative Survey – Historical – Experimental – Ethnographic – Case Study – Inter-relationship studies – Development studies – Research Design – Sampling: concept of population and sample – Characteristics of a good sample – Sampling techniques – Sampling errors and ways to reduce them.

### **Unit IV: Research Tools & Techniques**

Tools and Techniques – Characteristics of a good research tool - types of research tools and techniques and their uses – questionnaire - interviews – observations – tests and scales- projective and socio-metric techniques - rating scales – inventories - Writing of Research Proposal and Research Report.

### **Unit V Statistical Tools for Data Analysis**

Descriptive Statistics – Measures of Central tendency and variability – Graphical representations of data – Normal Distribution: Characteristics and application – Parametric & non-parametric tests - Co-efficient of correlation: linear, biserial, point biserial, tetrachoric, canonic, Pearson product moment, rank difference, partial and multiple Correlations – Regression and prediction – Chi-square – Test of Significance: t-test and f-test – SPSS and its applications.

### **Reference Books**

1. Bhawana Mishra, (2003). General Methods of Educational Research. New Delhi: Sumit Enterprises.
2. Sharma, R.A. (2006). Parametric & Non-parametric Statistics in Education and Psychology. Meerut: R. Lall Book Depot.
3. Henry E. Garrett, (2007). Statistics in Psychology and Education. New Delhi: Paragon International Publishers.
4. John W. Best & James V. Kahn (2005). Research in Education (9<sup>th</sup> ed.). New Delhi: Prentice Hall of India Pvt. Ltd.
5. Joanna Swann and John Pratt (2007). Educational Research in Practice. Chennai: Chennai Micro Print (P) Ltd.
6. K.M. Bhandarkar (2007). Statistics in Education. Hyderabad: Neelkamal Publications Pvt. Ltd.

7. Muniruddin Qureshi (2005). Educational Research. New Delhi: Anmol Publications Pvt. Ltd.
8. Dash K (2007). Education Measurement Statistics and Guidance Services in Schools. New Delhi: Arise Publishers & Distributors.
9. Ravi Prakash (2007). Problems of Educational Research. New Delhi: Commonwealth Publishers.
10. Vijay Kumar (2004). Fundamentals of Educational Research. New Delhi: Sanjay Prakashan.
11. Radha Mohan (2006). Research Methods in Education. Hyderabad: Neelkamal Publications Pvt. Ltd.
12. Pauline V. Young (2005). Scientific Social Surveys and Research. New Delhi: Prentice Hall of India Pvt. Ltd.
13. Sharma R.A. (2007). Essentials of Scientific Behavioral Research. Meerut: R. Lall Book Depot.
14. Ruhela S.P. (2001). Research Tools in Sociology of Education. New Delhi: Indian Publishers & Distributors.
15. Ravi Prakash (2007). Historical Research in Education. New Delhi: Commonwealth Publishers.

### **ED304 ADVANCED EDUCATIONAL TECHNOLOGY**

**Credit: 4:0:0**

#### **Objectives:**

1. To understand the applications of advance technology in education.
2. To explore the potentials of advanced computer based technologies in teaching and learning process.
3. To understand the concept and applications of online teaching method and designing principles.

#### **Unit I: Educational Technology: A Conceptual Framework**

Educational Technology: definition, meaning, scope and relevance to the present system of Education – Applications of Educational Technology for distance and open learning – Systems approach: meaning, significance and process – Modern trends in Educational Technology: e-learning, e-teaching, digital conferences, Learning Management Systems.

#### **Unit II: Computer Based Instruction: A Conceptual Framework**

Historical background of Computers – Parts and functions of computers – Uses of computers: teaching, learning, evaluation, administration and research – Applications of computer languages: VB, HTML, Flash – Methods of CBI: Tutorials, Drill and Practice, Simulations and Instructional Games – Development of CBI materials: steps, planning and phases – Computerized test construction and administration.

#### **Unit III: Computer Based Multimedia Instruction**

Multimedia: meaning, significance and applications – Developing & Designing of Multimedia: steps, planning, creating & testing phases, designing principles – Modern

trends in multimedia – Virtual Reality & Virtual Environments – Multimedia for co-operative and collaborative learning – Advantages & Disadvantages of multimedia.

#### **Unit Iv: Web Based Instruction & Designing**

Meaning, scope and significance of WBI – guidelines and principles of web based instructional design – Computer mediated communication: internet, e-mail, voice mail and chat – History of internet – Models of WBI: Instructional System Design (ISD) and Hyper Media Design (HMD) model – Computer languages for designing WBI – Merits and demerits of WBI.

#### **Unit V: Online Teaching Method And Designing**

Online teaching: meaning, scope and relevance – Fundamentals of online communication – Role of instructor and learner in online teaching – Designing instruction for online environment: instructional design, online course development – Communication and Collaboration – Assessment of online learning – Merits and demerits of online teaching.

#### **References:**

1. Aggarwal J.C. Essentials of Educational Technology – Teaching and learning innovations.
2. Kumar K.L. Educational Technology
3. J. Brown, (et.al.), An Instructional Technology Media and Methods
4. Berge, Z, and Collins, M. (1995), Computer Mediated Communication and the Online Classroom.
5. Hiltz, S.R. (1994). The Virtual Classroom: Learning Without Limits via Computer Networks: Focus on the Learner.
6. Harasim, L. (1990). Online Education: Perspectives on a New Environment, NY: Praeger.
7. Robyler, M.D., Edwards, J. & Havirluk, M.A. (1997) Integrating Educational Technology into Teaching. New Jersey: Prentice Hall.
8. Michael, D. Williams (Ed.) (2000). Integrating Technology into Teaching Learning: Concepts and Applications. Prentice Hall.
9. Riedl, J. (1995). The Integrated Technology Classroom. MA: Allyn & Bacon.
10. Gaurav Chadha and Nafay Kumail, S.M. (2002) E-learning: An Expression of the knowledge economy.
11. Harley Hahn – Internet Complete Reference (2<sup>nd</sup> edition)
12. James E. Shuman – Multimedia in Action
13. John Vice – Virtual Reality Systems
14. Pradeep Mandav & Kamleshwar (2001). Visual Media Communication
15. Merrill, P.F. and Hammons, K. (1996). Computers in Education (3<sup>rd</sup> ed.)
16. Roerden, L.P. & Avruch, S. (1997). Web-based Projects for your Classroom.



## ED305 EDUCATIONAL MEDIA PRODUCTION

**Credit: 4:0:0**

### **Objectives:**

At the end of the course, the student will be able to

1. Understand the application, types and methods of educational media.
2. Writing Script for educational media and identification of appropriate location and to know techniques and strategies of the audio and video production.
3. Understand the concepts of post-production like audio-video mixer and digital mixer in audio-video production.

### **Unit I Introduction to Educational Media**

Concept of Media – Background of Educational Media: Print, Radio, Television, Online media, Edusat – Objectives of media – Kinds of Media: Traditional, Print, Electronic Media – Types of programme: commercial, documentaries, short film, News production

### **Unit II Applications of Electronic Media in Education**

Electronic media services in countries – Use of Electronic Media in Universities, Colleges and Schools – Role of Electronic media in formal and non-formal education, journalism, commercials, advertising and informatics – Impact of Electronic media in Education – Applications of electronic media in research.

### **Unit III Pre-Production**

Meaning and characteristics of Scriptwriting – Types and structure of script – Factors and significance of script – Source for Scripting: historical documents, statistical data, Journals, observation and interview – writing synopsis – Story board – Location: identification & planning.

### **Unit IV Production**

Basics of audio-video production: types of studio, elements of camera, types of camera – Camera Techniques: camera operations, technical & aesthetic qualities of camera, types of shots, multi camera operation – Lighting Techniques: physical & aesthetic factors, color quality, lighting arrangements – Audio Production: sound, music, recording methods, software in audio recording, audio duping.

### **Unit V Post-Production**

Concept of mixing and editing – audio editing & visual editing – Video editing & Film editing – linear and non-linear editing – Graphics & special effects – editing software & hardware – role of editor – Evaluation of finished product.

### **References:**

1. 3D Graphics & Animation – Mark Giambrano
2. The Technique of Television production – Gerald Millerson
3. The Dynamics of Mass Communication – Joseph R. Dominics



4. Television Field Production and Reporting – Frederick Shook
5. Editing by Design – Jan V. White (1982)

## **ED306 SPECIAL EDUCATION**

**Credit: 4:0:0**

### **Objectives:**

- to enable the student to understand the concepts, objectives and methods of special education.
- to enable the student to understand the various aspects of growth and development of handicapped children.
- to help the student to understand the method of clinical assessment and evaluation.
- to enable the student to understand gifted and creative children, disabled children and juvenile delinquents.

### **Unit I**

Concept and nature of special education – objectives – types – historical perspective - integrated education.

### **Unit II**

Education of Mentally Retarded, Education of the Visually Impaired, Education of the Hearing Impaired, Education of the Orthopaedically Handicapped - characteristics – causes - degree of impairment – etiology and prevention – educational programmes.

### **Unit III**

Education of the Gifted and Creative Children – characteristics – creativity and identification process – educational programme.

### **Unit IV**

Learning Disabled Children – characteristics – identification – educational programme – Special education – Importance of mother and family – Impact of exceptional children on the family – attitudes of society – family and school – Organisation of special schools – special schools and integrated approach – Principles of organizing special classes – mainstreaming and normalization – Integrated education – nature and scope.

### **Unit V**

Education of Juvenile Delinquents – characteristics – problems of alcoholism, drug addiction – anti-social and character disorder – educational programmes for Rehabilitation.

### **References:**

1. Davis, W.E. (1986), Special Education, Allyn and Bacon Inc., London.
2. Gressman, Herbert (1994), Special Education in a Diverse Society, Allyn and Bacon, Boston.

3. Hallahan, D.P. and Cauffman, J.M. (1988), Exceptional children – An introduction to Special Education, Prentice Hall, New Jersey.
4. Heward, William L. and Orlausky, Michael D. (1992). Exceptional children – An introductory survey of Special Education, Merrill, New York.
5. Repp, A.C. (1983), Teaching the Mentally Retarded, Prentice Hall, New Jersey.
6. Wallace G. and Larsen, S.C. (1978), Educational Assessment of Learning Problems: Testing for Teaching, , Allyn and Bacon Inc., London.

## **ED307 EDUCATIONAL MEASUREMENT AND EVALUATION**

**Credit: 4:0:0**

### **Objectives:**

- to provide for essential theory relating to the basic concepts of measurement and evaluation.
- to study critically various tools and techniques of evaluation.
- to provide for skill development in test construction and analysis and interpretation of test results.

### **Unit I The Measurement and Evaluation Process**

Measurement & Evaluation: Principles and characteristics - Taxonomy of educational objectives – Objective-based teaching and evaluation – Different approaches to formulating objectives and specific learning outcomes. Inter-relationship between measurement and evaluation in education.

### **Unit II Techniques and Tools of Evaluation**

Oral, written and performance tests; Subjective and objective tools; and Observational and rating techniques. Essay type, short answer type and different forms of objective type test items. Check-lists, inventories, questionnaires, schedules, scales, sociometry and performance tests – the construction of these tools - Measurement of intelligence, aptitude, interest and personality traits - Evaluation of achievement (cognitive, affective and psychomotor outcomes) – Teacher-made and Standardised tests – Diagnostic and Achievement test

### **Unit III Test Construction**

General principles of test construction and standardization - Basic characteristics of good measuring instruments (validity, reliability, objectivity, adequacy, usability, economy and norms) – the different types, ways of determining them, factors affecting them, their importance and application - Writing test items, scrutinizing and editing – Preliminary selection and piloting – Item analysis – Item selection – Standardisation procedures – Norm referenced and Criterion referenced measurement – Scaling – Interpreting Test Scores and Norms.

### **Unit IV Analysis and Interpretation of Evaluative Data**

Application of statistical concepts and techniques- Interpreting test results and other evaluative data – Factors and precautions to be considered in the interpretation and use of evaluative data.

### **Unit V Modern Trends in Evaluation**

Grading – Semester system – Continuous Internal Assessment – Question Bank – Use of Computers in evaluation.

#### **References:**

1. Bloom, Benjamin S. et. Al., “Handbook on Formative and Summative Evaluation of Student Learning”
2. Carey, Lou M., “Measuring and Evaluating School Learning”.
3. Ebel, R.L., “Measuring Educational Achievement”
4. Lorber, Michael,A. and Pierce, Walter D. “Objectives, Methods and Evaluation for Secondary Teaching” (3<sup>rd</sup> edn.)
5. Wood, D.A.,”Construction, Development and Interpretation of Achievement Tests”.
6. Wiersma, William and Jurs. Stephen G. “Educational Measurement and Testing”. (2<sup>nd</sup> edn.)

## **ED308 EDUCATIONAL PLANNING AND ADMINISTRATION**

**Credit: 4:0:0**

#### **Objectives:**

To introduce the student to the basic concepts of educational administration and planning.

1. To familiarize the students with basic concepts, principles and process of Educational administration and planning.
2. To develop in the student an understanding and appreciation of the role of the different agencies in educational planning and administration.
3. To develop a concept of competency in educational administration.
4. To acquaint the student with the broad problems in the field of educational administration and planning.

#### **Unit I**

Meaning and scope of Educational Administration – Development of modern concept of Educational Administration – Taylorism - Administration as a process – Administration as a bureaucracy - Human Relations Approach to Administration

#### **Unit II**

Meeting the Psychological needs of employees, systems approach specific trends in Educational Administration such as (a) Decision making (b) Organisational Compliance (c) Organisational Development (d) PERT (e) Modern trends in Educational Management.

#### **Unit III**

Leadership in Educational Administration: Meaning and Nature of Leadership, Theories of Leadership, Styles of Leadership, Measurements of Leadership

#### **Unit IV**

Educational Planning: Meaning and Nature, Approaches to Educational Planning, Perspective Planning, Institutional Planning.

#### **Unit V**

Educational Supervision: Meaning and Nature - Supervision as service activity - Supervision as a process - Supervision as functions, , Supervision as educational leadership, Functions of supervision, Planning the supervisory programme, Organizing supervisory programme, Implementing supervisory programme.

#### **References:**

1. Chandrakant, L.S., Educational Administration, What it means, Delhi, Manager of Publications 1957.
2. Government of India, Silver Jubilee Souvenir of ABE (1935-60), Delhi, Manager of Publications, 1960, Government of India, Reports of Indian Education.
3. Henry, H.B., Changing concepts in Educational Administration, University of Chicago Press, 1955.
4. Indian Institute of Public Administration, The organization of Government of India, Bombay, Asia Pub., 1958.
5. Adams, Don (Ed.), Educational Planning, Centre for Development of Education, All University School of Education, New Delhi, 1961.
6. Naik, J.P., Education Planning in India.

### **ED309 TEACHER EDUCATION**

**Credit: 4:0:0**

#### **Objectives:**

1. To enable the student to understand about the concept, aims and scope of teacher education in India with its historical perspectives.
2. To understand about the development of teacher education curriculum in India.
3. To enable the student to understand about the different competencies essential for a teacher for effective transaction.
4. To understand about the teaching models, teaching skills and various aspects of supervision and feedback.

#### **Unit I: History of Teacher Education in India**

Teacher Education: concept, aims and objectives, and scope – Historical perspectives of teacher education in India: Ancient, Medieval, British and post-independence period – Recommendations of various Commission on teacher education: Kothari commission, National Policy on Education.

#### **Unit II: Functioning of Teacher Education in India**

Aims and Objectives of Teacher Education in India at different levels: elementary, secondary and university level – Admission and selection of student – Teachers at different level and their qualifications - Types of teacher education programmes and their curriculum today - Updating the curriculum and methods in Teacher Education.

### **Unit III: Training Programmes in Teacher Education**

The teacher educators, their qualifications, preparations and in-service training, Teaching as a profession, their professional growth - Professional organizations for various levels of teachers and their role; Performance appraisal of teachers - Faculty improvement programmes - Preparation of teachers of vocational and technical education

### **Unit IV: Agencies of Teacher Education Programme**

Types of teacher education programmes and agencies: In-service teacher education, Pre-service teacher education, Distance education and teacher education, Orientation and Refresher courses - New types of Institutions: Regional College of Education, the Four-Year Colleges, Comprehensive College, State Institute of Education.

### **Unit V: Role of Teacher Education Bodies**

Current problems - Internship programme – Relationship of the Training Institution with the schools and the community; Library and equipment, Demonstration and Experimental school; Supervision of practical work and maintenance of records. - Control and Finance of Teacher Education Institutions - Internal organisational set-up of Teacher Education Institutions and their problems.

### **References:**

1. Educating the Educated - M.L. Sharma
2. Teacher Education in India - Bhaskara Rao
3. Need Based Curriculum - Arun K. Gupta
4. Teacher's Role, Status, Service, Conditions and Education in India. A reference Manual with Special Reference to Committees and Commissions. - Agarwas J.C.
5. Challenges in Teacher Education - Mohit Chakravarty
6. Teacher Education in India, Origin and Development of Teacher Education in India - Nizam, Elahi

## **ED310 PSYCHOLOGY PRACTICAL**

### **Credit: 0:0:2**

The M.Ed. student should do any six of the following psychology practical and submit the record note book:

1. Emotional Intelligence Scales
2. Creativity Test
3. Interest inventory

4. Level of Aspiration
5. Adjustment inventory
6. Personality Test
7. Span of Attention
8. Memory Drum
9. Mirror Drawing
10. Human Maze

### **ED311 INTERNSHIP TRAINING PROGRAMME**

**Credit: 0:0:2**

The M.Ed. students shall be undergoing internship training programme for 10 days to develop the self-instructional packages like CBI materials, Audio and Video production, and other e-learning software in the IT and Media based industries and submit the package along with the report.

### **ED312 RESEARCH COLLOQUIUM**

**Credit: 0:0:2**

- ❖ Each student should present their research progress in the colloquium.
- ❖ Each student should submit two scholarly articles which are related to his / her field of research and present the same in the colloquium.

### **ED313 CURRENT TRENDS IN HIGHER EDUCATION**

**Credit : 4:0:0**

#### **Objectives:**

1. To make the students to understand the objectives, role and functioning of Higher Education System in India.
2. To understand the role of national and state level policies on Higher Education
3. To understand the role of NGOs and Indian Universities in Higher Education.
4. To enhance the knowledge about Distance and Open learning system in India.

#### **Unit I Higher Education: An Overview**

Higher Education – Introduction, Objectives, Management of higher education, Training and Administration, Professional Education, Vocational Education, Innovative programmes, Special Education activities – Higher Education: National & International level – Policies on higher education with special reference to NPE 1986 – Educational Pattern in Higher Education – Reforms in Higher Education.

#### **Unit II: Agencies of Higher Education**

Ministry of Human Resources and Development (MHRD): Objectives, Role, Planning and Funding – University Grants Commission (UGC): Objectives, Rights, Funding

Procedures, Research Activities, Schemes – Role of Professional Councils: AICTE, ICAR, BCI, NCTE, NCERT and MCI. – Role of Higher Education Agencies in Research.

### **Unit III: Role of Ngos in Higher Education**

NGOs in Higher Education: Activities, Functioning and Funding – UNESCO: Mission and Vision, organization, structure, contribution towards higher education – Commonwealth of Learning (COL): Mission, activities and functions, governance, administrations, collaborative and other services – UNICEF: objectives, activities and contribution towards higher education – Role of Universities in higher education – World Health Organization (WHO): objectives, activities and contribution towards higher education.

### **Unit IV: Quality Maintenance in Higher Education**

Evaluation, Assessment and Accreditation of Higher Education Institutions – National Assessment and Accreditation Council (NAAC): Vision, Mission, Functions, Assessment in terms of Infrastructural and Curricular aspects, Financial support, procedure for making application, action plan and assessment and accreditation for different states – SWOT analysis.

### **Unit V: Distance & Open Learning System**

Distance Education in 21<sup>st</sup> Century – Challenges of Distance Education – Role of Indian Universities in Distance & Open learning – Role of IGNOU: Objectives, Functions, Features, Thrust areas in Higher Education – Role of Distance Education Council (DEC) – Role of Technologies in Distance & Open Learning: Electronic Media, e-learning, Internet, e-teaching and Virtual University Systems.

### **References:**

1. Ashok Kumar (2004). Current Trends in Indian Education. New Delhi: Ashish Publishing House.
2. Sunil Behari Mohanty (2004). Improving University and College Teaching, New Delhi: A.P.H. Publishing Corporation
3. Udai Veer (2004). Modern Problems of Education, New Delhi: Anmol Publications Pvt. Ltd.
4. Digumarti Bhaskara Rao (2003). World Education Forum, New Delhi: Discovery Publishing House.
5. Chhaya Shukla (2004). Reforms in Higher Education, New Delhi: Sumit Enterprises.
6. [www.ugc.ac.in](http://www.ugc.ac.in)
7. [www.ncte-in.org](http://www.ncte-in.org)
8. [www.ignou.ac.in](http://www.ignou.ac.in)

## **ED314 METHODOLOGY OF RESEARCH AND STATISTICS**

**Credit : 4:0:0**



**Objectives:**

1. To acquaint students with the meaning and methods of educational researches
2. To understand about the students process and steps in research
3. To formulate research design and tools for data collection
4. To get knowledge of descriptive statistics and to analyze and interpret

**Unit I**

Research - meaning , Characteristics of Research, Methods of Research – Descriptive, Developmental and intervention Research. Case study Participatory and Ex post fact research, Qualitative studies Basic, Applied and Action research. Educational Research – Nature and Types. Research in educational policy and reforms, Classroom research and innovative practices. Positivist paradigm. Phenomenological Research.

**Unit II**

Research process: Steps in Research, formulation of a problem for research – Review of Literature, Statement of problem, Delimitation, Definition of terms, Objectives, Hypothesis, Functions and role of hypothesis in research. Variable meaning and types, Causative and hermeneutic approaches, Archival research.

**Unit III**

Experimental Research, Principles and steps, Types of Experimental Designs. Techniques of experimental manipulation. Concept of control, Experimental errors.

Non Experimental Research – Survey Research – Purpose and Types Census and sample Surveys, Merits and demerits, Survey methods Application of survey, case study, Field study.

**Unit IV**

Research Design – Principles and components, Methods of Data collection, Sources of data, - primary and secondary sources – field operation logistics mapping and location of units.

Tools and techniques of data collection – Non – testing techniques and scaling techniques, Achievement and Criterion Tests, Data Collection in school context, Focus group and participatory methods, Establishing validity and reliability of research data.

Sampling, census vs. sampling. Characteristics of a good sample, sampling frame and sample size sampling methods: probability and non – probability samples, sampling and non – sampling errors.

**Unit V**

Descriptive statistics – Measures of centrality, Dispersion, Skewness, Kurtosis, Correlation and Regression analysis. Parametric and non – parametric test t - test and chi – square test, Sign test, Run test, ANOVA, ANCOVA. Multivariate Analysis, Factor Analysis.

Analysis and interpretation of data: Data processing – categorization and coding. Analysis of data computer programs & packages, SPSS, draw of inferences and interpretation – Reporting research, guide lines in preparation of a research report, format of a research report. Use of reference, foot notes, bibliography – glossary appendix.

**Reference:**

1. Best, J.W and Khan. Research in Education. New Delhi: Prentice Hall of India, 2003.
2. Creswell, John, W. Research Design. Qualitative and quantitative approaches: London: Sage Publications, 1994.
3. Ferguson, G.A Statistical analysis in Psychology and Education. New York: Mc Graw Hill Inc, 1976.
4. Garret, H.E. Statistics in Psychology and Education, Bombay: Vakels, Febber and Simmons Ltd., 1981.
5. Kothari, C.R. Research Methodology Methods and Techniques. New Delhi: New Age International Publications Pvt Ltd, 2006.
6. Lokesh, Koul, Methodology of Educational Research, New Delhi: Vikas Publishing House, 2005.

**Special Paper I**  
**ED315 CONTEMPORARY ISSUES IN EDUCATION AND EDUCATIONAL**  
**MANAGEMENT**

**Credit : 4:0:0**

**Objectives:**

1. To make the students to understand about multiplicity of courses
2. to explore the quality management in education
3. to understand about the autonomy and accountability
4. to make the students aware about the finance management and marketing of education services

**Unit I Multiplicity of Courses**

Traditional courses, Distance Learning, E-Learning, Fulltime courses, part time courses, own time courses, inter disciplinary courses, hybrid courses, interface courses, courses in global perspective, ecological courses, education and nature studies, conservation of natural resources and sustainable development and its management, performance indicators and bench marking in higher education. New quality perspectives in higher education

**Unit II Quality Management in Education**

Definition, Elements, Planning, Approaches, input process, output, academic audit, Accreditation, Total Quality Management (TQM). Quality in global perspective – global standards, SWOT Analysis, ISO 9000 certification

**Unit III Autonomy and Accountability**

Issues relating to Autonomy, Accountability and Accreditation of individual, departmental and institutional level. Impact of stake holders and the societal system - Campus tranquility management, extra curricular activities for institution and social bonding, extension services and outreach programmes for societal development activities

**Unit IV Finance Management in Education**

Essence of Finance Management – importance, functions, goals. Sources of education finance – Govt. grants – central, state, UGC grants, local bodies, donations, endowments, grant-in-aid, private capital, foreign sources – Expenditure management – patterns of education expenditure – salary and overheads, scholarships, fee concessions

### **Unit V Marketing of Education Services**

Services marketing, product mix, price mix, people and communication mix, people in education service, bench marking, quality assurance in teaching, interrelation and globalization of education marketing. Intellectual property rights in education service.

#### **References:**

1. Aggarwal, J.C., Educational Administration, School Organisation Supervision, Arya Depot, New Delhi, 1967.
2. Brown, E.J., Secondary School Administration.
3. Buch, Dr. M.B., Institutional Planning for Educational Improvement and Development.
4. Government of India, Challenges of Education; A Policy Perspective, Ministry of Education, 1985.
5. Moorer, Sam H., How Good is your Supervisory Programme? , An Instrument for Analysis.
6. Naik, j.p., The Role of Teachers in Educational Planning and Development, R. College of Education, Bhopl, 1968.
7. Satay, Ragunath, School Administration and Organisation, Dhanput Rai and Sons, Jullender, 1969.
8. Sharma, R.C., Recent Trends in Educational Administration.
9. Singh, J., Education and Human Resource Development, Deep & Deep Publications Pvt. Ltd., New Delhi, 2004.
10. Jagannath Mohanty, Educational Administration, Supervision and School Management, Deep & Deep Publications (P) Ltd., New Delhi

### **Special Paper II – ED316 EDUCATIONAL MEDIA AND INSTRUCTION**

**Credit : 4:0:0**

#### **Objectives:**

1. To understand the applications of Educational media and Communication..
2. To explore the potentials of advanced educational technologies in teaching and learning process.
3. To understand the role of educational media for instructional design.
4. To know the applications of computers in educational media production.

### **Unit I: Introduction to Educational Media & Communication**

Meaning and Scope of Educational Media – Systems approach to Educational Media – Educational Media production – Communication: meaning, types and models – Technology in Communication – Educational Media and Educational Development –

Information and Communication Technology – Role of Educational media in Educational Research.

### **Unit II: Applications of Educational Technology**

Educational Technology: definition, meaning, scope and relevance to the present system of Education – Applications of Educational Technology for distance and open learning – Modern communication Technology – Systems approach: meaning, significance and process – Modern trends in Educational Technology: e-learning, e-teaching, digital conferences, Learning Management Systems.

### **Unit III: Role of Educational Media for Instructional Design**

Audio-Visual media in Education – Psychological factors for using Audio-Visual aids – Characteristics of audio-visual media – projected and non-projected aids – Preparation of Programmed instructional material – Role of Educational media for formal, non-formal and in-formal education – Role of Educational media for children with special needs.

### **Unit IV: Educational Media and Its Programmes**

Educational Television – Satellite Instructional Television Experiment – Cable TV – Community Television – EDUSAT – Educational Websites – Internet – Online programmes – UGC’s Countrywide Classroom programme – TV Documentaries – Quiz programmes – Kids programmes – News programmes – Commercial programmes.

### **Unit V: Computers in Educational Media and Instruction**

Use of Computer Technology in Education – Computers in Classroom – Computer as a teaching & learning tool – Computer Based Instructions: CAI, CALL – Computers for evaluation – Computers in Research – Multimedia for effective instruction – Web Based Instruction: meaning, scope and application – Computerized test construction and evaluation.

### **References:**

1. Aggarwal J.C. Essentials of Educational Technology – Teaching Learning Innovations in Education – Vikas Publishing House Pvt. Ltd.
2. J. Brown, (et.al.), An Instructional Technology Media and Methods
3. Berge, Z, and Collins, M. (1995), Computer Mediated Communication and the Online Classroom.
4. Pradeep Mandav & Kamleshwar (2001). Visual Media Communication
5. Merrill, P.F. and Hammons, K. (1996). Computers in Education (3<sup>rd</sup> ed.)
6. Roerden, L.P. & Avruch, S. (1997). Web-based Projects for your Classroom
7. Robyler, M.D., Edwards, J. & Havirluk, M.A. (1997) Integrating Educational Technology into Teaching. New Jersey: Prentice Hall.
8. Michael, D. Williams (Ed.) (2000). Integrating Technology into Teaching Learning: Concepts and Applications. Prentice Hall.
9. Riedl, J. (1995). The Integrated Technology Classroom. MA: Allyn & Bacon.
10. Gaurav Chadha and Nafay Kumail, S.M. (2002) E-learning: An Expression of the knowledge economy.

## ED317 TEACHING PEDAGOGY

**Credit: 2:0:0**

### **Objectives:**

1. To acquire the knowledge of teaching and learning
2. To understand the factors affecting teaching and learning
3. To apply the technology in teaching and learning
4. To understand the evaluation of teaching and learning

### **Unit I Introduction to Teaching**

Meaning, Definition, Principles and Types of Teaching – Objectives of Teaching – Teaching Methods – Approaches of Teaching: Philosophical, Sociological and Psychological Approaches of Teaching – Teaching Styles: Role of Teacher – Qualities of teacher – Role of curriculum in teaching.

### **Unit II Introduction to Learning**

Meaning, Definition, Principles and Types of Learning – Characteristics of Learner – Types of Learner – Role of theories of Learning – Domain based learning: Cognitive, affective and psychomotor – Individual differences of the learner – Role of Motivation in learning.

### **Unit III Technology in Teaching and Learning**

Introduction to Educational Technology – Instructional aids: Projected and Non-projected aids – Role of mass media in teaching and learning – Selection of media – Role of computers in teaching and learning

### **Unit IV Factors affecting Teaching and Learning**

Sociological Factors: Society, family, school, peer group – Demographic factors: Age, sex, socio economic status – Psychological factors – Interests, personality, attitude, aptitude, intelligence and emotional factors

### **Unit V Evaluation of Teaching and Learning**

Meaning, Definition and scope of Evaluation – Types of Evaluation: Diagnostic, formative and summative – Difference between quantitative and qualitative evaluation – Role of test and measurement in evaluation.

### **Reference:**

1. *Bhatia, H. R. (1977), Textbook of Educational Psychology, The McMillan Company of India Ltd., New Delhi.*
2. *Aggarwal, J. C. (1995), Essential Educational Psychology, Vikas Publishing House Pvt. Ltd., New Delhi.*
3. *Chauhan, S. S. (1988), Advanced Educational Psychology, Vikas Publication, New Delhi.*
4. *Sharma, K. N. (1990), Systems, Theories and Modern Trends in Psychology, HPB, Agra.*

5. Taneja V.R – (1973) Education Thought and Practice, sterling publications, sterling publications, New Delhi.
6. Aggarwal J.C. Philosophical and Sociological Foundations of Education.
7. Saider.K.G. – Problems of Educational reconstruction in India, Asia publishing House, Bombay.
8. Sampath.K.Panneerselvam.A and Santhanam.S. (1984) Introduction to Educational Technology, Sterling Publishers Pvt. Ltd., New Delhi
9. Kumar K.L.(2004) Educational Technology, New Age International Publishers, New Delhi.
10. Rogers.E. M(1983) Diffusion of Innovations, The Free Press, New York.
- 11.** Sampath.K.Panneerselvam.A and Santhanam.S. (1984) Introduction to educational technology, Sterling Publishers Pvt. Ltd., New Delhi



**ADDITIONAL SUBJECTS**

<b>Code</b>	<b>Subject Name</b>	<b>Credit</b>
09ED201	Optional I: Content cum Methodology of Teaching English I	3:0:0
09ED202	Optional II: Content cum Methodology of Teaching English I	3:0:0
09ED203	Optional I: Content cum Methodology of Teaching English II	3:0:0
09ED204	Optional II: Content cum Methodology of Teaching English II	3:0:0
09ED205	Optional I: Content cum Methodology of Teaching Social Sciences I	3:0:0
09ED206	Optional I: Content cum Methodology of Teaching Social Sciences II	3:0:0
09ED207	Optional I: Content cum Methodology of Teaching Computer Science I	3:0:0
09ED208	Optional I: Content cum Methodology of Teaching Computer Science II	3:0:0
09ED209	Optional I: Content cum Methodology of Teaching Tamil I	3:0:0
09ED210	Optional II: Content cum Methodology of Teaching Tamil I	3:0:0
09ED211	Optional I: Content cum Methodology of Teaching Tamil II	3:0:0
09ED212	Optional II: Content Cum Methodology Of Teaching Tamil II	3:0:0
ED318	Educational and Socio – Economic Development	0:0:4
ED319	Educational Perspective and Agricultural Economy of India	0:0:4
09ED310	Curriculum Designing	3:0:0
98ED 315	Advanced Philosophical and Sociological Aspects of Education	4:0:0
09ED316	Advanced Educational Psychology	4:0:0
09ED317	Curriculum Designing	4:0:0
09ED319	Educational Research Lab	0:0:2
09ED320	Computer Applications in Research	0:0:2
09ED321	Cognitive Psychology	4:0:0
09ED322	Advancement in Special Education and Rehabilitation	4:0:0
09ED901	Internship Training Programme	0:0:1

**09ED201 OPTIONAL I: CONTENT CUM METHODOLOGY OF  
TEACHING ENGLISH I**

**Credit: 3:0:0**

**Objectives:**

1. To enable the teacher trainees to acquire knowledge of the sound system in English and to familiarize them with the appropriate terminology to describe the sounds in English.
2. To enable the teacher trainees to understand the connections of English speech and to acquire good pronunciation and fluency of speech.
3. To acquire a working knowledge of various aspects of Modern English Grammar and usage at the Higher Secondary level.
4. To develop the reference skills.

**Unit I Phonetics of English**

The different speech organs and their role - vowels and consonants-their place and manner of articulation - The concept of the phoneme and the allophone - Phonetic transcription - Stress-word stress and sentence stress



### **Unit II Fluency**

Use of conventional formulas – Greeting, apology, invitation, refusal, accepting, thanking – Describing and interpreting pictures, tables, graphs, maps etc., - Telling stories and narrating incidents – Play reading and Dramatization – Debates and Interviews.

### **Unit III Lexis**

Word formation – Affixation – Conversion – Compounding – Other minor devices – Patterns of spelling – Phrasal verbs and prepositional phrases.

### **Unit IV Advanced Grammar**

The noun phrase – MHQ (Modifier, Headword, Qualifier) – The verb phrase – Tense forms – Auxiliary verbs – Modals. The sentences – Types of sentences - Voice and reported speech - Sentences: Simple, compound and complex

### **Unit V References and study skills:**

Dictionary skills – SQ3R methods of Reading – Use of library and Reference work – Bibliography and Annotated Bibliography

### **References:**

1. Dr. Y.K. Singh, 2007 “Teaching of English”, APH Publishing Corporation
2. Dr. Maya Joseph 2005 Communication skills.
3. Krishna Mohan, Meera Baneji, 2007 “Developing Communication Skills”, Macmillan India Ltd.
4. M.S. Bhatnagar, 2007 “Phonetics and Grammar”, alfa Publications, New Delhi.
5. Dr. Kalyan Pandey, 2000 “Fundamentals of English Linguistics and Phonetics”, Indian Publishers Distributors Delhi.

## **09ED202 OPTIONAL II: CONTENT CUM METHODOLOGY OF TEACHING ENGLISH I**

**Credit: 3:0:0**

### **Objectives:**

1. To familiarize the teacher – trainees with the various aspects of the B.Ed. Programme with special reference to the nature of the language skills to be developed.
2. To train student teachers in strategies and current techniques of English teaching.
3. To foster the habit of examining syllabi and teaching materials.
4. To enable the teacher trainees to acquire an understanding of role, nature, status and rationale for learning English.

### **Unit I: Preliminary Statement**

The role of English in India today – Teaching the four basic skills – listening – speaking – reading – writing. Learning the mother tongue and learning a second language – interference and Transfer from the mother tongue – Implications for teaching methods.

### **Unit II Teaching skills**

Bloom's Taxonomy of Educational Objectives – cognitive, Affective and Psychomotor domains – General and specific Instructional objectives. Micro teaching – Principles and Skills

### **Unit III Methods and Approaches**

Methods – Grammar – Translation – Bilingual – Direct – Situational – Oral – Structural – Communicative method. Approaches – Notional – Situational – Skill based – Communicative syllabus.

### **Unit IV Teaching of English**

Lesson plan – teaching prose - teaching of vocabulary – active and passive vocabulary – vocabulary island – content words and structural words – criteria for selection of vocabulary – Teaching aids – Teaching poetry – Teaching grammar.

### **Unit V Evaluation**

Testing of oral skills – pronunciation and fluency – Testing grammar and usages – Testing reading comprehension – Testing vocabulary – Testing writing skills. Characteristics of a good test – objectivity – Reliability – Validity – Feasibility. Graphical representation – Measures of central tendency - Measures of variability – Correlation.

### **Reference:**

1. Dr. Y.K. Singh, 2007 “Teaching of English”, APH Publishing Corporation.
2. Dr. N.L.N. Jayanthi, 2008 “Teaching of English”.
3. Dr. Maya Joseph 2005 Communication skills.
4. Krishna Mohan, Meera Baneji, 2007 “Developing Communication Skills”, Macmillan India Ltd.
5. English Language Education, Source Book for the Diploma in Teacher Education.

## **09ED203 OPTIONAL I: CONTENT CUM METHODOLOGY OF TEACHING ENGLISH II**

**Credit: 3:0:0**

### **Objectives:**

The student teacher

1. Acquires knowledge of different uses of language.
2. develops understanding of the remedial measures and analysis of errors
3. Develops skills in creating writing.
4. Acquires knowledge of the Traditional Resources used for instruction in English Education

### **Unit I Creative writing in English**

Collection of newspaper reports on events and functions, preparation of a report for newspapers, writing for journals – seminar, symposium and panel discussion.

### **Unit II Composition**

Letters – formal, Informal. Situational composition – Précis writing – Comprehension – Translation – Free composition – Paragraph writing – essay writing.

### **Unit III**

#### **Remedial English**

Remedial English – Identification of students difficulties in learning English and providing suitable remedial measures – diagnosis of students difficulties in learning English – Error analysis.

### **Unit IV**

#### **The English Readers**

Types – Intensive, Extensive, and Supplementary. Criteria for selection of Reader – Aims and Purposes –Reviews of textbooks prescribed for Secondary and Higher Secondary classes.

### **Unit V**

#### **Traditional Resources**

A survey of traditional resources used for instruction in English education (Models, Language Games, Music, Drama, Literature, Periodicals and Role Play)

#### **References:**

1. Dr. Geeta Rai, “Teaching of English”, Vinay Rakheja 2007.
2. Dr. N.L.N. Jayanthi, “Teaching of English” 2008.
3. Dr. Maya Joseph 2005 Communication skills.
4. Krishna Mohan, Meera Baneji, 2007 “Developing Communication Skills”, Macmillan India Ltd.
5. English Language Education, Source Book for the Diploma in Teacher Education.

### **09ED204 OPTIONAL II: CONTENT CUM METHODOLOGY OF TEACHING ENGLISH II**

**Credit: 3:0:0**

#### **Objectives:**

1. To be familiar with the English sounds
2. To improve the spoken ability in English
3. To develop the skill of reading and writing ability
4. To familiarize with the technology of languages teaching.
5. To familiarize with the Principles of curriculum construction.

#### **Unit I: Spoken English – Phonetics**

Language and Linguistics - Different organs of speech and their functions –Classification of 44 English sounds-Difference between voice and voiceless sounds. Oral practice in new language items – Types of drills: Repetition drills – Substitution drills – Matching tables.

#### **Unit II: Technology for Language Teaching**

Teacher made aids – Flash cards, charts, models, Blackboard sketches. Mechanical Aids – overhead projector, Tape recorder, Radio, Television. Programmed Learning – Language Laboratory – power point presentation.

#### **Unit III: Listening and Speaking**

Listening Skills – Different kinds of listening materials – listening activity – The phases of a listening class – listening for perception – listening for completion – uses of listening aids.  
Speaking Skills -Communicative competence – Importance of spoken English – methods to teach spoken English.

#### **Unit IV: Reading and Writing**

Methods of teaching reading to beginners – Reading comprehension – Silent Reading – Loud Reading – Skimming – Scanning. Writing skills – Mechanical skills – Grammatical skills – Discourse skills

#### **Unit V Curriculum of English**

Curriculum, Syllabus and Books

Curriculum-Principles of curriculum construction and modern trends, need for curricula to meet individual differences and special curricula for the gifted and slow learners. Syllabus – Different types (structural, skill-based, situational, topical and notional). Criteria of books, journals etc. – School libraries reading and community resources.

#### **Reference:**

1. Dr. Geeta Rai, “Teaching of English”, Vinay Rakheja 2007.
2. Dr. N.L.N. Jayanthi, “Teaching of English” 2008.
3. Krishna Mohan, Meera Baneji, 2007 “Developing Communication Skills”, Macmillan India Ltd.
4. M.S. Bhatnagar, 2007 “Phonetics and Grammar”, alfa Publications, New Delhi.
5. Dr. Kalyan Pandey, 2000 “Fundamentals of English Linguistics and Phonetics”, Indian Publishers Distributors Delhi.

### **09ED205 OPTIONAL I: CONTENT CUM METHODOLOGY OF TEACHING SOCIAL SCIENCES I**

**Credits : 3:0:0**

#### **OBJECTIVES:**

To enable the student teacher to:

1. Appreciate the need for learning History, Geography, Civics, Sociology and Economic.
2. Develop knowledge about the basic principles governing the construction of a social science.
3. Develop the classroom skills needed for teaching of Social sciences using modern methodology.
4. Develop the ability to organize co-curricular activities and community resources for promoting social science learning.
5. Acquire the knowledge, method and techniques of evaluation and preparation of question in social sciences.

#### **UNIT I: Introduction to Teaching Social Sciences**

Nature and Objectives of Teaching Social sciences – Need for teaching the subjects History, Geography, Civics, Sociology and Economics under Social sciences in schools – Place of social sciences in secondary school curriculum – Concept of Social Studies – Differences between Social sciences and social studies.

**UNIT II: Curriculum of Social Sciences**

Meaning, objectives and importance of social science curriculum – Factors influencing curriculum design - Principles of designing social sciences curriculum – Components of social sciences curriculum – Approaches to organizing social sciences curriculum in terms of correlation, integration, concentric, spiral, unit and chronological approaches – Recommendations of Kothari Commission and NCERT's Curriculum Framework (2000).

**UNIT III: Instructional Methods for Teaching Social Sciences**

Need for different Instructional strategies – Methods and Models of Instructional strategies – Teacher directed instructional strategies: Lecture, Demonstration, Guest Speakers and Questioning – Learner directed instructional strategies: individualized instruction, programmed instruction, computer assisted instruction, project work and field work – Group directed instructional strategies: Discussions, Debate, Symposium, Panel Discussion and Brainstorming.

**UNIT IV: Instructional Process in Teaching Social Sciences**

Meaning and different components of instructional process – Instructional Plan – Areas of Instructional Plan: Teaching-learning strategies, objectives, learning alternative and evaluation, content, concepts, processes, values – Types of Planning: Lesson, Unit and Year plans – Micro teaching lesson plans.

**UNIT V: Evaluation in Teaching Social Sciences**

Meaning, Characteristics and Purposes of evaluation in social sciences – Aspects of Evaluation: Formative and Summative Evaluation, Evaluation of cognitive and non-cognitive outcomes, Tools of evaluation in social sciences, Teacher made tests and standardized tests – Construction and standardization of Question paper: Content analysis, writing instructional objectives in behavioral terms, Preparing a Blueprint, Developing test items for cognitive and non-cognitive outcomes, Setting a good question paper – Assessing students' performance: Quantitative assessment (marking), Qualitative assessment (grading) and Qualitative interpretation of students' performance.

**References**

01. Sharma, R.A. (2006). Teaching of Social Sciences. Meerut: R. Lall Book Depot.
02. Aggarwal, J.C. (2007). Teaching of Social Studies: A Practical Approach (4<sup>th</sup> Edition). New Delhi: Vikas Publishing House Pvt. Ltd.
03. Binny & Binny. (1952). Teaching the social studies in Secondary Schools. New York: McGraw Hill Book Co.
04. Smith-Elal, (1961). Educational Encyclopedia. New York: Prentice Hall.

**09ED206 OPTIONAL I: CONTENT CUM METHODOLOGY OF  
TEACHING SOCIAL SCIENCES II****Credits : 3:0:0****Objectives**

To enable the student teacher to:

1. Understand the Institution's responsibilities to enhance teaching and learning of social sciences.
2. Develop knowledge about the content prescribed for social sciences in Schools.
3. Understand the recent trends in teaching social sciences using some innovative teaching methods in Schools.
4. Understand Modern Aids and different types of Educational Media need for teaching social sciences effectively.
5. Understand the role of information and communication technology and its applications in teaching social sciences.

### **Unit I: Role of Institution in Teaching Social Sciences**

Arranging and organizing field trips to places of cultural importance like Temples, Church, Mosques and other Monumental places – Role of Social Sciences Laboratory – Establish Social Sciences Club – Conducting cultural competitions and awareness campaigns – School Participation in societal issues – Arranging guest lectures by eminent social scientist.

### **Unit II: Content of Social Sciences**

The subject content prescribed for classes VIII, IX, X, XI and XII by the Tamil Nadu Textbook Society.

### **Unit III: Recent Trends in Teaching Social Sciences**

Activity Based Learning (ABL) method – Active Learning Method (ALM) – Multiple Intelligences in teaching social sciences – Constructivism and Teaching Social Sciences – Research findings in the areas of teaching Social sciences – Need for updating the content of social sciences.

### **Unit IV: Educational Aids and Media in Teaching Social Sciences**

Need and Role of instructional Aids and Media – Print Media: Magazines, Journals, Newspapers, Workbook, Research Reports, Historical documents – Electronic Media: TV, Radio, Cinema, Internet, Satellite, Edusat – Modern Equipments: OHP, Slide projectors, Globe, Computers with accessories.

### **Unit V: Teaching Social Sciences in Future**

Role of ICTs in Teaching Social sciences – Teaching Social Sciences through Online: Digital conferencing, e-Learning, e-Teaching, e-Content – Role of Technology Integration in Teaching Social sciences – Role of Net Forum and Weblog in Teaching social sciences.

### **References:**

1. Bhattacharya Srinivas and Daiji, D.R (1966). Teaching Social Studies in India Schools. Baroda: Acharya Book Depot.
2. Erning C.Arthu and Binding David (1952), Teaching the Social Studies in Secondary Schools. New York: McGraw Hill Book Co.
3. Brimble, L.F.J., Frederick, J. (1950). Social Studies and world citizenship. Bombay: Macmillan & Co.
4. Dray Joan and Jadan (1950). A Handbook of Social Studies, London.



5. Robyler, M.D. (2008). Integrating Educational Technology into Teaching. New York: Pearson Prentice Hall.

## **09ED207 OPTIONAL I: CONTENT CUM METHODOLOGY OF TEACHING**

### **COMPUTER SCIENCE I**

**Credit: 3:0:0**

**Objectives:** To enable the student-teachers to

1. Acquire the knowledge and the process of teaching Computer Science.
2. Understand the process of curriculum construction in Computer Science
3. Understand the evaluation process in computer science.

#### **UNIT I Nature and Scope**

Brief history of development of computers – Nature and scope of computer science - Values of Computer science – Role of Computer Science in Primary, Secondary and Higher Secondary School Curriculum

#### **UNIT II Aims, Objectives and Planning of Teaching Computer Science**

Aims and objectives of teaching Computer Science – Instructional objectives – General and specific objectives - Planning – meaning, importance and purpose – Year plan, unit plan, lesson plan – Micro Teaching: Concept of Micro teaching.

#### **UNIT III Methods**

Methods of teaching computer science: Inductive and Deductive Methods, Analytic and Synthetic Method, Heuristic method, Laboratory method, Programmed Learning: linear and Branching method. Dynamic Methods of teaching computer science: Group Seminar, Symposium, panel discussion, workshop techniques, Project method.

#### **UNIT IV Curriculum**

Curriculum in Computer Science: Meaning, Principles of curriculum construction in Computer science, Development of a curriculum in Computer Science – Existing Computer science curriculum: Nature and Defects – Computer Science text book: characteristics of text book, appropriate use of text book, Computer Science text book evaluation

#### **UNIT V Evaluation**

Measurement and Evaluation- Types of evaluation – Formative and summative – Types of tests – diagnostic, prognostic and achievement tests (Special focus on Blue Print) - Characteristics of a good test – Analysis and interpretation of scores – Measures of central tendency, Measures of variation and rank correlation – CAE.

#### **References:**



1. Hemant Kumar Goyal, (2004), Teaching of Computer Science ,R.Lall Book Depot, Near Govt. Inter College Meerut.
2. Hasnain Qureshi, (2004), Modern Teaching of Computer Science, Anmol Publications Pvt.Ltd, New Delhi.
3. Bhandula, P.C. Chadha and Siddeeshvar Sharma (1995), Teaching of Science, Prakash Brothers, 546 Book Market, Ludhiana.
4. Sharma, R.C.(1985) Modern Science Teaching , Dhanpat Rai and Sons, New Delhi.
5. Passi, B.K. Becoming Better Teacher, MicroTeaching Approach.
6. Saunders, H.N. (1967), The Teaching of General Science in Tropical Secondary School, Oxford University Press, London.
7. Chauhan, S.S. (1985), Innovation in Teaching and Learning of Process, Vikas Publishing House.
8. Garrett (1979), Statistics in Psychology and Education, Vakils, Feffer and Simons Ltd., Bombay.
9. Introduction to Information Systems, James A.O. Brien (1997), McGraw Hill, New York.
10. Information Technology – The Breaking Wave, Dennis, P. Curtin et.al., (1999), Tata McGraw Hill Publishing Co. Pvt. Ltd., New Delhi.
11. Singh Y.K. (2005), Teaching of Computer Science, A.P.H. Publishing Corporation, New Delhi.
12. Rajasekar .S (2004), Computer Education and Educational Computing, Neelakamal Publications Pvt. Ltd, New Delhi.

### **09ED208 OPTIONAL I: CONTENT CUM METHODOLOGY OF TEACHING COMPUTER SCIENCE II**

**Credit: 3:0:0**

**Objectives:** To enable the student-teachers to

1. Understand the role of computer laboratory in teaching Computer Science.
2. Acquire the knowledge of recent trends and innovations in Computer Science teaching.
3. Develop the skill of developing the courseware for CBI
4. Acquire the knowledge of software tools for teaching computer science.

#### **UNIT I Role of Computer Laboratory in Computer Science Teaching**

Computer Science Laboratory – Importance of Laboratory Design – Lecture Room cum Lab Plan – Organization of Practical work : Administration, grouping of pupils, Instruction to pupils, discipline in the lab – Care and Maintenance of Hardware and Software in the Computer Science Laboratory – Apparatus – Stock Registers.

#### **UNIT II Recent Trends in Computer Science Teaching**

Computer Science Club: Need, Importance and Organisation - Role of e-club in teaching computer science – Computer science Library – e-Library – Simulation Based Learning – Computer Game Based Learning - Multiple Intelligences and Computer Science teaching and Learning

#### **UNIT III Innovations in Computer Science Teaching and Learning**

Individualized Instruction - Programmed Learning: Meaning, Principles and Types – CBI - CAI – CML – Internet - WBI - e-Learning – Constructivism in e-learning – Theories of e-Learning – Interaction in e-Learning – Model of e-Learning – Teaching Methods in e-Learning – Qualities of the e-teacher.

### **UNIT VI Design and Development of CBI Courseware**

Courseware – writing objectives – task analysis – media selection – development styles and screen design – testing and evaluation – integrated unitized package – implementation of software – criteria for evaluation of a courseware

### **UNIT V Computer Science Teaching with Software Tools**

Basic Software Tools – Word Processing Software, Spreadsheet software, Database Software, Graphic Software in teaching and learning – Software tools in Classroom: Productivity and Teaching Strategies – Recent Developments in Software Tools.

### **Reference:**

1. M.D. Roblyer, Integration of Educational Technology in to teaching, University of Maryland University College.
2. Database management System, Alexis Leon, mathews leon (1999), Vikas Pup. House Pvt. Ltd., New Delhi.
3. Introduction to Information Systems, James A.O.Brien (1997), McGraw Hill, New York.
- 3 Information Technology – The Breaking Wave, Dennis, P.Curtin et.al., (1999), TataMcGraw Hill Publishing Co.Pvt.Ltd., New Delhi.
4. Visual Basic Developer's Guide to E-Commerce with ASP and SQL Server Noel Nerke, 2000 BPB Publishers, New Delhi.
5. Visual Basic 6, Thayer, Techmedia , New Delhi.
6. Software Engineering (1999) Roger S. Pressman, Tata Mcgraw Hill Publishing Company, New Delhi.

### **09ED209 OPTIONAL I: CONTENT CUM METHODOLOGY OF TEACHING TAMIL I**

tpUg;gg;ghlk; - I: nghJj; jkpo; fw;gpj;jy;

Nehf;fq;fs;

1. jha; nkhopapd; ,d;wpaikahikAk; jha;nkhop fw;wypd; Nehf;fq;fisAk; mwpjy;
2. jha; nkhopapd gy;NtW gzfifisAk; mwpjy;
3. jha; nkhopapd; gy;NtW gapw;W Kiwfis mwpar; nra;jy;.
4. nra;As; ciueilg; ghlq;fisf; fw;gpj;jypd; NtWghLfis mwpjy;.
5. ,yf;fz gapw;wypy; cs;s jpwd;fis tsh;j;jy;
6. ,yf;fz tpjpf; tiuaiwfisf; fw;gpf;f tpisah;l;L Kiwfisg; gad;gLj;j gapw;rpaspj;jy;.
7. gy;NtW tifahd fl;Liug; ghlq;fis fbd tiffis mwpar; nra;jy;

8. nkhopngah;g;G – nkhopahf;fk; Mfpatw;wpd; mbg;gil tpjpfis mwpe;J nfhs;sr; nra;jy;  
 9. Nfl;Lzh;jy; jpwidAk; nghUSzh;hy; jpwidAk; tsh;j;jy;  
 10. rpwf;f glf;Fk; gof;fq;fis tsh;j;jy;

rpwe;j vOj;jhw;wiy tsh;j;jy; gy;NtW tifahd eilNtWghLfis mwpar; nra;jy;. ghlf;Fwpg;gpd; gad;fis mwpar; nra;jy;

tpdhf; Nfl;lypy; mike;Js;s gy;NtW jpwd;fis tsh;j;jy; - xU rpwe;j nkopg;ghl Mrphpah;fSf;fhd gz;Gfis tsh;j;jy; - ghlj;jpl;lk; mik;j;jypy; etPd njhopy;El;g rhjdq;fspd; gad;ghLfis mwpyj;. tpdhj;jhs; mik;j;jypy; cs;s ntt;NtW jpwd;fis tsh;j;jy;tpdhj;jhs; mik;j;jypy; cs;s Nfhl;ghLfis mwpar;nra;jy;.

### **1. fy;tp Vw;ghl;by; jha; nkhop ngWk; ,lk;**

Nehf;fq;fs; - gad;fs; - vz;zj;ij ntspapLq;fUtp jpUj;jkhf Ngr gbf;f vOj tho;f;if Ef;Gfs; , fw;gidahw;wiy tsh;j;jy; - moFzwhw;wiy tsh;j;jy; - r%fg; gz;ghl;L kugpdidawpAk; fUtp nkhopahFk;. fy;tpapd; ,d;wpaikahik – R+o;epiyapd; Fiwfis mwpyj; , r%ff; flikfis Nkw;nfhs;Sjy; - tho;f;if elj;jj; Njitahd jpwd;fisg; ngWjy; gpwnkhopfisf; fw;gjw;Fj;jha;nkhopNa mbg;gil. khepy nkhopapypUe;J jha;nkhop NtWgLk; NghJ Vw;gLk; rpf;fy;fs; tPl;L tof;fpy; ,Ue;J khWgLk; nkhopapd; nghJ tof;fpidf; fw;Fk; NghJ Vw;gLk; rpf;fy;fs;.

### **2. jha;nkhopapidq; gwpw;Wk; Kiw**

gz;ilNahh; fz;l gapw;W Kiw (rq;ffhyk; Kjy; jw;fhyk; tiuapy;) jw;fhyKiwapy; - tpiahl;L Kiw nray; jpl;l Kiw – jdpq;gapw;rp Kiw Nkw;ghh;it gbg;G Kiw – tphpTiu Kiw – ,k;Kiwiag; gy;NtW epiyapy; (eLepiy, cah;epiy, Nky;epiy) gad;gLj;Jq;fhy; Vw;gLk; epiw Fiwfs;.

### **3. nra;As; ciueilqlghlq;fs;**

gapw;wypd; Nehf;fq;fSf;fpilNa mike;Js;s NtWghLfs; - gy;NtW tifahd ciueilfisAk; nra;Al;fisAk; fw;gpj;jypy; Nkw;nfhs;Sk; topKiwfs; - nra;As; eyk; ghuhl;br; RitAzuhw;wiy tsh;j;jy;.

### **4. ,yf;fzk; fl;Liu, fw;gpi;iy;**

#### **fw;gpi;jypd; Nehf;fq;fSk; KiwfSk;**

njhy;fhg;gpaj;jpYk; ed;D}ypYk; \$wg;ngWk; gz;ilNahh; fw;gpf;Fk; Kiwfs; , ciuhrphpah;fs;

fhl;Lk; Kiwfs; , jw;fhyf; nfhs;if tpjpKiw, tpjptpsf;fKiw, ciueil fl;Liu Mfpa ghlq;fSlid; ,izj;Jf; fw;gpj;jy; , ey;y tiuKiwfspd; gad;fs; - njhlf;fg; ngWk; tFg;G – jiyg;Gfisj; Njh;e;njLj;jy; - tpsahl;L Kiwapy; ,yf;fzk; fw;gpj;jy; fl;Liu vOJtd; tsh;r;rp epiyfs; - tiffs; - nrhw;nwhluhfg; gapw;rpfs; , tho;f;if tuyhw;Wf; fl;Liu - tUzidf; fl;Liu rpe;jidf; fl;Liu tpthjf; fl;Liu, tuyhw;Wf; fl;Liu, ghlf;fl;Liu, fijf;fl;Liu, Ma;Tf;fl;Liu, ciuahly; fl;Liu (fPo;epiy Nky;epiy tFg;Gf;FhpaJ).

### **5. Nky;epiy tFg;Gfspy; mspf;fq;gLk; gapw;rpfs;**

nra;jpfisj; njhFj;jy; , nra;jpfis tifg;gLj;Jjy; , nra;jpfis tphpTgLj;Jjy; , eak;glTk; , jpwd;glTk; , ciuj;jy; , nrhy;yhl;rpj;jpwd; , fhytiuaiwia tpQ;rhJ vOJk; gapw;rp, jdf;nfdj;jdp eilaikj;Jf; nfs;sy;.

ey;y ,yf;fzg; ghlij;jpd; nghUz;ik E}w;gl kw;Wk; fbjk; , fbjq;fspd; tiffs; , fbjk; vOJk; Kiw, vOJjypd; Nehf;fk; , RUf;fp vOJjy; , tphpj;J vOJjy; - nkhopgapw;rp – nrhw;nwhlh; - mikg;Gk; , jUjy; , jiyg;Gfs; ,Ljy; - epWj;jw;FwpaPLfs;

jha;nkhopapdpd;W gpw nkhopapy; nkhopngah;g;G, gpw nkhopfspdpd;W jha;nkhopapy; nkhopngah;g;G, nkhop ngah;g;gpy; vOk; rpf;fy;fs; ngah;gpd; tiffs;.

## **09ED210 OPTIONAL II: CONTENT CUM METHODOLOGY OF TEACHING TAMIL I**

### **tpUg;gg;ghlk; - 11: rpwq;Gj;ikpo; fw;gpi;jy;**

#### **Nehf;fq;fs;**

1. Jkpo; ,yf;fpaq;fspd; Njhw;wk; , tuyhW, tiffs; gw;wpa mwpT ngWjy;.
2. Goq;fhy ,yflfpaq;fspypUe;J NtWgl;L mikfpw ,f;fhy ,yf;fpaq;fspd; gz;GfisAk; Nghf;FfisAk; mwpjy;
3. ciueil ,yf;fpak; , GJf;ftpij vd;gdtw;wpd; ,yf;fzk; , gz;Gfs; gw;wp mwpjy;.
4. ,yf;fpaf; fiyapd; gz;Gfs; cWg;Gfs; gw;wp mwpjy;.
5. ,yf;fpaj;jpd; nghUisAk; tbtj;ijAk; gw;wpj; jpwdha;T mwpT ngWjy;
6. jkpo; nkhopapd; le;jpyf;fzj;ijAk; mwpjy;.
7. nkhopapay; mwpT nkhopahrphpah;fSf;F ,d;wpaikahjJ. Mjyhy; xypapay; , cUgpay; , njhlhpay; gw;wpa fUj;Jf;fis mwpjy;. mit jha;nkhop fw;gpj;jYf;Fg; gad;gLkhw;iwg; Ghpe;Jnfhs;Sjy;.
8. jw;fhy ciueilapd; ,yf;fzj;ij mwpjy;.
9. mwptpay; , Ml;rp, jfty; nkhlh;gpay; , fzpg;nghwp Nghd;w gy;NtW Jiwfspy; jkpopd;

tsh;r;rp gw;wp mwpjy;

10.nkhopapd; gy;NtW gad;ghl;ilAk; , mjw;Nfw;w nkhop NtWghl;ilAk; mwpjy;

Rpwg;Gj; jkpo; fw;wy; -1

**1. ,yf:fpa tuyhW**

rq;ffhyk; - rq;f ,yf:fpaq;fs; - gj;Jg;ghl;L, vl;Lj;njhif, rq;ffhyk; jkpo; ,yf:fpag;  
nghw;fhyk.; jw;fhy ,yf:fz E}y; njhy;fhg;gpak; - mjd; rpwg;Gfs; - ePjpE}y;fs; -  
gjpndz;fPo;f;fzf;F, gf;jp ,yf:fpak; - gd;dpU jpUKiw - gd;dpU Mo;thh; - ehyhapu  
jpt;tpa gpuge;jk; - ,ul;ilf; fhg;gpaq;fs; lk;ngUq;fhg;gpaq;fs; - IQ;rpWfhg;gpaq;fs;  
, ngUq;fis - ciuE}y;fs; , gs;spg;ghlq;fisg; gapw;Wjypy; ,tw;wpid gad;gLj;Jjy;.

**2. ,yf:fpaj; jpwdha;T**

mwptpaYk; fiyAk; - fiyfs;: ,yf:fpaf; fiy, ,yf:fpaj;jpd; ,ay;Gfs; - czh;r;rp – fw;gid  
– fw;gidapd; tiffs; - Xireak; - njhil eak; - nrhy; eak; - nghUs; eak; -  
Fwpg;Gg;nghUs; - gheyk; ghuhl;ly; gapw;rpf;F ,f;fUj;Jfs; cjTkhW.

**3. ,yf:fzk;**

vOj;jpyf;fzk; , nrhy;ypyf;fzk; - cah; epiyg; gs;spf;Fwpa ,yf:fzg; gFjpfSk;  
njhlh;Gila ,yf:fz E}y;fSk;

**4. nkhopfs;**

nkhopapd; Njhw;wk; gw;wpa nfhs;iffs; - nkhopAk; nkhopapaYk; - xypapay; -  
xypAWg;GfSk; mtw;wpd; njhopy;fSk; - nka;nahypfs; - capnuhypfs; -  
xypapy; mwpT nkhopahrphah;f;Fg; gad;gLjy; - khzth;fspd; cr;rhpg;Gg;  
gpiofisg; Nghf;Fjy; - xypadpay; - xypad;fis tif nra;Ak; Kiw – jkpopy; xypad;fs; -  
nrhy;yhf;fg; gapw;rpf; cUthf;Fjy;

**5. gy;Jiwj; jkpo;**

ciueilapd; tsh;r;rp – ciuf;Nfhit, ciuf;Nfhitapd; tiffs; - thf;fpa mikg;G , gf;jp  
mikg;G ciuf;Nfhitapd; mikg;G epWj;jy; **FwpaPLfspd; gad;ghL.**

**09ED211OPTIONAL I: CONTENT CUM METHODOLOGY OF TEACHING  
TAMIL II**

**tpUq;gg;ghlk; - 1: nghJj; jkpo; fw;gpi;jy; - ,uz;lhk; gUtk;**  
**myF 1: jpwd;fisf; fw;gpi;jy;: Nfl;ly; NgRiy; tha;nkhopg; gwpw;rp**

**Nfl;ly;**

tiuaw;w Nfl;lypd; top fw;wy; - Nfl;ly; gof;fj;jpjpd tsh;j;jy; - nghUs; khwhJ RUf;fp vOJjypd;  
fPo; gapw;rp ngWjy; - gj;jpfisAk; nghpa gj;jpfisAk; RUf;Fjy; - gy;NtW Nehf;fq;fis  
epiwNtw;wg; ghh;j;jy; - nra;jpfis mwpjy;. eak; ghuhl;ly; Nghd;witfSf;fhf tpsk;guk; -  
Nfl;lyf;Fk; gapw;wYf;FKs;s NtWghLfs;

### **NgRjy:**

mOj;jkhf NgRjy; - ,yf;fz tOtpd;wp NgRjy; - kuGnkhops; - gonkhops; - njhlf;f epiy  
Ngr;rhw;wy; , nrhw;nghh; - fye;Jiuahly; - tpdhbtphd ,tw;iwj; njhlf;f epiy, eLepiy, cah;epiy  
tFg;GfSf;F nghUj;jkhf mik;Jf; nfjs;Sjy;

### **tha;nkhopg; gapw;rp**

,jd; ,d;wpaikahik – Nehf;fq;fs; - gad;fs; , cr;rhpg;gpy; Vw;gLk; rpf;fy;fs; - kdg;ghlk ;  
nra;jypd; ,d;wpaikahik - jpUj;jpa Ngr;rpy; nghUe;jpa ey;ypay;Gfs; jpUj;jpa Ngr;rpjpd  
tsh;f;f JizahFk; ,yf;fpaq;fs; - ehlfq;fs; , tha;nkhopg; gapw;rpapjdg; gy;NtW epiyfspy;  
misp;g;jw;fhd Kiwfs; , Mh;tj;ijj; J}z;Lk; jiyg;Gfisg; gw;wp ciuahly; - rpWth; ghly;fs; - Ml;lg;  
ghly;fs; fij nrjy;Yjy; - fye;Jiuahly; nrhw;Nghh; - nrhw;nghopTfs; - kd;wj;jpy; NgRjy;.

### **myF-2: jpwd;fis fw;gpi;jy; gbi;jy;.**

gbf;ff; fw;gpi;jypd; Nehf;fq;fs; - gbf;ff; fw;gpf;Fk; Kiwfs; , vOj;J Kiwg;gbg;G – nrhy;  
Kiwg;gbg;G – nrhw;nwhlh; Kiwg;gbg;G - ,tw;wpd; epiwFiwfs; - nrhw;fsQ;rpak; ngUf;fy; -  
gbg;gpy; Mh;tk; J}z;ly; - tha;tpl;Lgbj;jy; - Kiwfs; – ed;ik jPikfs; – E}y;fisg; gad;gLj;Jjy; -  
E}yfg;gbg;G, jpd thu khj ,jo;fs; gbf;Fk; gapw;rp Nghd;wit. Mo;e;jgbg;G, mfd;w gbg;G  
Nehf;fq;fs; , epiwFiwfs; KjpNahh;f;Fg; gbf;ff; fw;gpi;jy; nray;gL vOj;jwpT – ehl;Lg;Gwf;  
fy;tp.

### **myF-3: jpwd;fisf; fw;gpi;jy;: vOJjy;**

ifnaOj;Jk; vOj;Jg; gpioapd;ikAk; , vOJtjw;Fg; gapw;rp mspj;jy; - rpy Kjw; gapw;rpfs; - vOJ  
fUtpfisg; gpbf;Fk; Kiw – ey;y ifnaOj;jpd; ey;ypay;Gfs; , njspT, msT, moF, ,ilntsp, vOj;Jg;  
gapw;rp Kiwfs; , thpnahw;wpnaOJjy; - ghh;j;J vOJjy; - nrhy;tij vOJjy;.

### **myF-4: ghlf;Fwpg;G tiffs; , nkhopahrphahpd; gz;Gfs;**

ghlf;Fwpg;G jahhpi;jypd; ,d;wpaikahik

tpdTjypd; Nehf;fq;fs; , gad;fs; , tpdhf;fs; tpdTjypd; jpwik – tpdhf;fs; tpdTk; Kiwfs; - tiffs;  
fw;gpf;Fk; tpdhf;fs; , tPl;LNtiy tpdhf;fs; , Njh;T tpdhf;fs; Nghd;wit. Rpwe;j tpdhf;fspd;

rpwg;gpay;Gfs; , ey;y Njh;tpd; gz;Gfs;

**myF-5: ghIE}y; - E}yfk; - nkhopf;fw;gpj;jypd; El;gf; \$Wfs;.**

rpwe;j ghIE}y;fisj; jahhpf;Fk; nghOJ kdjpy; nfhs;sj;jf;fr; nra;jpfs; - ey;y ghIE}ypy;  
mike;jpUf;f Ntz;oa ed;ikfs; - Mo;e;j gbg;gpw;fhd ghIE}y;fspd; jd;ikfs; - Jizg;ghl E}y;fspd;  
jd;ikfs;

**E}yfk;**

gs;sp E}yfk; , tFg;G E}yfk; - fUtp E}yfk;.

nkhopf;fw;gpj;jypd; El;gf;\$Wfs;

Jizf; fUtpfisg; gad; gLj;Jjy; - nlf;rpj;NlhNfhg; (fz;Nzhl;l;j;pid mstpLk; fUtp) – thrpf;Fk; Ntfk;  
- thndhyp – glehlhg; gjpT xypg;gjpT ehLh – nkhopg; gapw;wha;Tf; \$Ik; - fw;gpf;Fk;  
nghwpfs; - jpl;lkpl;Lf; fw;wy; - ,it nkhopg;ghlk; fw;gpj;jYf;F vt;thW Jiz GhpfpwJ –  
nkhopf;fw;gpj;jypd; El;gf; \$Wfs; - njhiyf;fhl;rpapd; ,d;wpaikahik.

E}y;fs;

1. Jkpo; gapw;Wkiw – e. Rg;G nul;bah; - 1957
2. ew;lwkp; fw;gpf;Fk; Kiwfs; I & II – tp. fzgjp – 1989
3. jkpo; Itifg; ghlq;fSk; , fw;gpj;jYk; - tp. fzgjp – 1989
4. jkpo; fw;gpj;jy; - kh.R. jpUkiy – 1998
5. jkpo; fw;gpj;jy; , mZFKiwfSk; , nray; newpfSk; - ,uh. Re;jpuNrfh; - 2001.

**09ED212 OPTIONAL II: CONTENT CUM METHODOLOGY OF TEACHING TAMIL  
II**

**gUtk; - 2 PAPER –II**

**tpUg;gg;ghlk;- II: rpwg;Gj;i jkpo; fw;gpj;iy; - 2**

**1. ,yf;fpa tuyhW**

fk;guhkhazk; ,kfhghujk; ,Guhzq;fs; , rpw;wpyf;fpaq;fs; - rkaq;fs; tsh;j;j jkpo; - ,irj;jkpo; -  
ehlfj;jkpo;f; fij - ,yf;fpak; , Ugjhk; E}w;whz;L jkpo; ,yf;fpak; - ghujpahh; , ghujpjhrd; ,  
ftpkzp, ehkf;fy; ftpQh; , GJf;ftpij – ciueil – Mrphpah;fs; - Foe;ij ,yf;fpak; - gad; ,yf;fpak;.

**2. ,yf;fpaj; jpwdha;T**

,yf;fpaj;jpid Ef;h;jy; , jpwdha;jy; , ghuhl;ly; , gheyk; ghuhl;ly; , ,yf;fpaKk; tho;f;ifAk; -  
,yf;fpaj; Njhw;wk; gw;wpa nfhs;iffs; - mzpfs; - ctik, cUtk; - fiy, fiyf;fhfNt – Gjpdk; - rpWfij



,tw;wpd; ,yf;fzk; - Njhw;wKk; tsh;r;rpAk; - GJf;ftpjapd; gz;Gfs; - ,yf;fpa Efh;r;rp gw;wpa  
fUj;Jf;fisg; gs;spg;ghlk; elj;Jifapy; gad;gLj;Jjy;.

### 3. **,yf;fzk;**

nghUs; , ahg;G, mzpapyf;fzk; - cah;epiyg;gs;sp ghl mstpy;.

### 4. **nkhopapay;**

cUgd; - cUgd;fisf; fz;lwpjy; - tpjpf; - cUnghypadpay; - nrhy;tif – jkpopd; tpidr;nrhw;fs;  
\$l;Ltpid – njhlhpay; - khw;wpyf;fzf; Nfhl;ghL – thf;fpa khw;wg;gapw;rpfis cUthf;Fjy; -  
Ngr;Rnkhop – nkhopapy; fld; thq;Fjy; - rKjha nkhopapay; - jha;nkhop.

### 5. **gy;Jiwj; ikpo;**

Mwptpay; jkpo; - fiyr;nrhy; cUthf;fk; - tpjpf; - Ml;rpj; jkpo; - jfty; njhlh;Gj; Jiwapy; jkpo;  
- fzpg;nghwpAk; jkpOk; - fy;tpj;Jiwapy; jkpo; - jha;nkhop topf;fy;tp.

### **nray;Kiw Ntiy**

1. Kd;dwptpg;gpy;yhr; nrhw;nghopTfs; , nrhw;Nghh;
2. fUj;juq;fk;
3. ehlfq;fs; vOjp ebj;jy;
4. thndhypg; Ngr;irf; Nfl;Lf; Fwpg;ngLj;jy;
5. jpwdha;Tf; fl;Liufs; vOJjy;
6. gheyk; ghuhl;ly;
7. kyh; jahhpj;jy;
8. fw;gpj;jy; nghUs; jahhpj;jy; njhlh;ghd fUtpfs; jahhpj;jy;
9. glj;njhFg;G jahhpj;jy;
10. tpdh tq;fp jahhpj;jy;
11. Fiwawp gapw;rpAk; epiwjPh; gapw;rpAk;
12. nkhopg; gapw;rpfs; jahhpj;jy;

### **E}y;fs;**

1. jkpo; ,yf;fpa tuyhW – lhf;lh; K.th.
2. ,yf;fpaf; fiy – m.r. Qhdrk;ge;jd; 1989
3. ,yf;fpaj;jpwd; - lhf;lh; K.th. 1965
4. nkhop tuyhW – lhf;lh; K.th. 1990
5. ,f;fhy nkhopapay; - lhf;lh; Kj;Jr; rz;Kfk; - 1988
6. mwptpay; jkpo; - lhf;lh; th. nr. Foe;ijwrhkp - 1990

## **ED 318 EDUCATIONAL AND SOCIO – ECONOMIC DEVELOPMENT**

### **UNIT –I NATURE OF ECONOMIC GROWTH AND DEVELOPMENT**

Concepts of Socio-Economic Development, the inter relationship as well as difference – Evolution of Development Concepts – Measurement of Economic Development – Physical quality of life index – Human Development Index – Cross Country Comparison.

#### **UNIT- II FACTORS IN THE DEVELOPMENT PROCESS**

Agriculture: Role of Agriculture in Development – Organisation of Agriculture and land reforms – supply response in agriculture – Concepts of markets surplus – size, productivity relation, stages of farm evolution – Strategies for Agricultural Development – Conditions for Rural Development.

Education and Development: Education and international migration - Migration and development – Rural urban migration – Unemployment – Types and measurement.

#### **UNIT- III POPULATION AND DEVELOPMENT**

Role of Population in Development Process – Conflicting views – The theory of demographic transition – Malthusian population trap. Poverty concepts – Human poverty – Measurement of poverty – impact of globalisation on poverty.

#### **UNIT – IV AGRICULTURE TAXATION & WELFARE OF RURAL AREA.**

Importance of Agricultural Taxation for a Developing Economy – Burden of Agricultural Taxation in India – Present position – The case of additional taxation on agriculture income tax.

#### **UNIT – V AGRICULTURAL LABOUR AND SOCIO – ECONOMIC CHALLENGES:**

Present position of agricultural labour – Causes of poor economic condition of farm labour – suggestions for improvement – Govt. measures – concept of self reliance. Impact of Liberalisation, Globalisation & Privatisation on Agriculture & Socio – Economic Development.

#### **REFERENCES:**

1. P.R.Brahmananda, V.R Panchamukhi, Development Process of Indian Economy.
2. Uma Kapila, Indian Economy since independence.
3. S. Gupta, Economic Liberalization.
4. K.P.M. Sundaram, Indian economy
5. E.T.Mathew, Agricultural Taxation & Economic Development in India.
6. Sunil.K.Dhawan, Agricultural labour force in a developed region.

### **ED 319 EDUCATIONAL PERSPECTIVE AND AGRICULTURAL ECONOMY OF INDIA.**

#### **UNIT - I THE STRUCTURE OF INDIAN ECONOMY.**

Indian Economy under colonial rule structural changes since independence natural resources and Environmental Degradation. The place of Agriculture in the National Economy- Crop Pattern in India since 1951.

## **UNIT – II AGRICULTURAL ECONOMY OF INDIA, AND RURAL DEVELOPMENT**

The need & Scope for Land Reforms in a Developing Economy – Tenancy Reforms – an appraisal of land reforms – Farm size, Productivity/ Profitability & Farm efficiency – subdivision and fragmentation - co op farming.

## **UNIT - III ORGANISATION OF RURAL G EDIT AND AGRICULTURE MARKETING**

The need for and sources of g edit for farmers – Special features of agricultural finance and agencies. (Co – Operative G edit societies, Land Development Bank, Nabard) the problem of rural indebtedness.

## **UNIT – IV IRRIGATION & AGRICULTURAL INPUTS**

Irrigation – Fertilisers & Manures improved seeds – Soil Conservation – Animal Husbandry & Dairy Development – Mechanisation of Agricultural Strategy, Green Revolution & Food problem food policy.

## **UNIT – V NEW AGRICULTURAL STRATEGY, GREEN REVOLUTION & FOOD PROBLEM AND POLICY**

Progress of Agriculture under Five Year Plans, Agriculture strategy, Green Revolution & Food Problem and Policy.

### **REFERENCE:-**

1. J.B.Bhattacharjee: Studies in India Agricultural Economics.
2. V.K.R.V Rao: New Challenges before Indian Agriculture.
3. Ministry of Agriculture; Annual Report 2006-2007
4. B.D. Dhawan: Irrigation in India's Agricultural Development.
5. Sidhu, B.S.: Land Referents, Welfare and Economic Growth.
6. Hanumantha Rao, C.H.: Agricultural Growth and Stagnation in India.

### **09ED310 CURRICULUM DESIGNING**

**Credit: 3:0:0**

#### **Objectives:**

##### **To enable the learner to**

1. Comprehend the various connotations of 'curriculum'
2. Discriminate documentary curriculum from operational curriculum.
3. Comprehend the foundations of curriculum.
4. Apply the determinants of curriculum in the construction as well as assessment.
5. Be exposed to the varieties of curricular development and evaluative models.

### **UNIT – I**

Curriculum – Different connotations – as content, as intended learning outcomes, as experiences provided, as experiences received, as a plan for academic action. Documentary curriculum – G. O's, Proceedings, Syllabi, Textbooks, Teachers' Handbooks, Students' workbooks, Laboratory manuals, Media manuals, Operational curriculum – variation in contexts.

### **UNIT – II**

Curriculum – Functional – Utility – Behavioural – Developmental – Conceptual – Disciplinary – Pedagogical – Curricular – Methodological – Instructional.

### **UNIT - III**

Curricular Models – Kerr's model, Johnson's model, Mc. Donald's model – Zia's model, stake's model, Stufflebeam's model, Scriven's model.

### **UNIT - IV**

Curriculum designing – Administrative approach – Grassroot's approach – Subject - centered – Learner centered – Problem centered – Work centered – Experience centered – Problem centered – Fused curriculum – Ratios as curricular indices.

### **UNIT – V**

Curriculum development – Agencies and personnel – NCERT, SCERT, University Boards of Studies – Curriculum experts – Subject specialists – Researchers – Practising teachers – Alumni – Professional parents – Social Workers – Personnel from industries, farms, firms, co- operative societies and banks.

### **Reference:**

1. Ericksons, H. Lynn, (2000). Stirring the head, heart and soul redefining curriculum and instruction. New Delhi: Sage Publication Pvt.Ltd.
2. Gagnon Jr. George W. and Michelle Collay (2000). Designing for learning six elements in constructionist classrooms. New Delhi: Sage Publication Pvt.Ltd.
3. R.P. Vashist (2007) Curriculum Research. New Delhi: Commonwealth Publishers.

## **09ED315 ADVANCED PHILOSOPHICAL AND SOCIOLOGICAL ASPECTS OF EDUCATION**

**Credit: 4:0:0**

### **Objectives:**

To enable the learner to:

1. understand philosophical enquiry as a basis of all educational endeavors.
2. critically appraise the contributions made by prominent educational thinkers to Indian and Western.

3. indulge in independent reflection on philosophical basis of major educational issues in the global context.
4. understand the concept and process of social organization, social stratification and institution.
5. understand the relationship between culture, society and education.

### **UNIT I: Schools of Philosophy**

Philosophy of Education: Meaning and Significance – Indian Philosophy: Sankhya, Vedanta, Buddhism, Jainism, Islamic traditions with special reference to Epistemology, Axiology and Metaphysics and their educational implications – Western: Idealism, Realism, Naturalism, Pragmatism, Existentialism, Marxism with special reference to Epistemology, Axiology and Metaphysics and their educational implications

### **UNIT II: Contributions of Philosophers**

Contributions of Indian Philosophers: Vivekanada, Tagore, Mahatma Gandhi and Aurobindo, Radhakrishnan - Contributions of Western Philosophers: Plato, Aristotle, John Dewey, Frobel, Paulo Friere and Montessori.

### **UNIT III: Indian Constitution for Education**

Education and the Indian Constitution – Articles related with education- Human rights education – National Values as enshrined in the Indian Constitution and their empiricism and positive relativism.

### **UNIT IV: Education & Sociology**

Sociology - Meaning and Nature of Educational Sociology and Sociology of Education. Relationship between Sociology and Education - Education as a social sub system. Education and the home- Education and the community- Education and modernization - Education and politics- Education and religion - Education and culture - Education and democracy.

### **UNIT V: Education for Indian Social System**

Social change- Social stratification- social mobility - social equity- equality of educational opportunities- constraints on social change in India (caste, ethnicity, class, language, religion, regionalism) – Education of socially and economically disadvantaged sections of the society- SC/ST, women and rural population.

### **Text Books:**

1. Biranchi Narayan..Dash, Teacher & Education in the emerging Indian Society-vol-1& vol 11 – Neelkamal Publications (P) Ltd., Hyderabad.2007
2. J. C. Aggarwal, Theory&Principles of Education – Vikas Publishing House PVT Ltd New Delhi. 2007.

### **Reference Books:**

1. Suresh Bhatnagar, Anamilka Saxena, Modern Indian Education and its problems – R. Lall Book Depot, Meerut 2007.
2. Ram Nath Sharma, Text book of Education Philosophy- Kanishka Publishers, New Delhi 2007

3. N.R. Swarup Saxena, Foundation of Educational Thought & Practice - R. Lall Book Depot, Meerut 2006.
4. Safaya, Shaida, Shukla, Teacher in emerging Indian society –Dhanpat Rai Publishing co.(P) Ltd. New Delhi 2006.

### **09ED316 ADVANCED EDUCATIONAL PSYCHOLOGY**

**Credit: 4:0:0**

**Objectives:**

To enable the learner to:

- 1) acquaint them with the objectives, methods and concepts of modern scientific psychology and the laws of principles governing learning and instruction.
- 2) understand, appreciate and synthesis the basic concepts of learning theories.
- 3) understand the nature of motivation, intelligence and personality and their functioning.
- 4) understand the nature of mental health and principles of mental hygiene and their implications for instructions.

**UNIT – I Psychology as a Scientific Study:**

Science of Psychology: Origin, trends and methods. Scientific characteristics of Psychology - Educational Psychology: Definition, scope, areas and fields of application—Schools of Psychology: Associationism, Behaviourism and Gestalt School

**UNIT – II Human Development**

Principles of Human Development, Role of Heredity and Environment in Human Development, Developmental Tasks and their educational implications, Characteristics of human beings at various stages of development, Erickson's stages of psycho-social development.

**UNIT – III Intelligence, Cognition and Creativity: A Theoretical Perspective**

Intelligence: Definitions Classifications, attribute and conceptual importance in education, Theories of Intelligence: Spearman, Thorndike, Thomson, Thurstone, Guilford. Cognitive Developmental Theories of Piaget, Bruner and Gagne. Measurement of Intelligence: Classification of tests, I.Q. and standard scores in intelligence . Creativity Definitions, measurement, classroom implications and its relation to intelligence and achievement.

**UNIT – IV Psychology of Learning and Instruction**

Learning: Definitions and constructs. Theories of Learning: Hull, Lewin, Tolman, Gestalt and Field theory of learning. Theories of Instruction: Behavioural Modification, Cognitive Construct, Task Analysis and Information Processing.

**UNIT – V Motivation and Personality**

Motivation: Meaning and Views: Psycho Analytic, Behaviouristic, cognitive and Field Humanistic. Personality: Meaning and various approaches to the study of personality. Theories

of Personality: Type theory, Trait theory, Factor theory, Dimensional theory, Psycho analytic theory and Humanistic theory Personality Assessment: Projective technique, Rorschach inkblot test and Thematic Apperception Test Adjustment: Concept, problem, adjustment mechanism and maladjustment. Mental Health and Mental Hygiene: Concept and importance, Guidance.

**Text Books:**

1. S.K.Mangal, Advanced Educational Psychology, Prentice Hall of India Pvt. Ltd, New Delhi, 2005.
2. Nagarajan. K. Educational Psychology, Ram publishers, Chennai, 2007.

**Reference Books:**

1. S.S.Chauhan, Advanced Educational Psychology, Vikas Publishing House (P) Ltd, Noida, U.P. 2007.
2. Suresh Bhatnagar, Advanced Educational Psychology, Lal Books, Meerut, 2007.
3. Norman A. Sprint Hall, Educational Psychology, Mc Grawhill, Delhi, 2003

**09ED317 CURRICULUM DESIGNING**

**Credit: 4:0:0**

**Objectives:**

To enable the learner to:

1. comprehend the various connotations of 'curriculum'
2. discriminate documentary curriculum from operational curriculum.
3. comprehend the foundations of curriculum.
6. apply the determinants of curriculum in the construction as well as assessment.
7. be exposed to the varieties of curricular development and evaluative models.

**UNIT – I**

Curriculum – Different connotations – as content, as intended learning outcomes, as experiences provided, as experiences received, as a plan for academic action. Documentary curriculum – G. O's, Proceedings, Syllabi, Textbooks, Teachers' Handbooks, Students' workbooks, Laboratory manuals, Media manuals, Operational curriculum – variation in contexts.

**UNIT – II**

Curriculum – Functional – Utility – Behavioural – Developmental – Conceptual – Disciplinary – Pedagogical – Curricular – Methodological – Instructional.

**UNIT - III**

Curricular Models – Kerr's model, Johnson's model, Mc. Donald's model – Zia's model, stake's model, Stufflebeam's model, Scriven's model.

**UNIT - IV**



Curriculum designing – Administrative approach – Grassroot’s approach – Subject - centered – Learner centered – Problem centered – Work centered – Experience centered – Problem centered – Fused curriculum – Ratios as curricular indices.

#### **UNIT – V**

Curriculum development – Agencies and personnel – NCERT, SCERT, University Boards of Studies – Curriculum experts – Subject specialists – Researchers – Practicing teachers – Alumni – Professional parents – Social Workers – Personnel from industries, farms, firms, co-operative societies and banks.

#### **Text Books:**

1. Ericksons, H. Lynn, Stirring the head, heart and soul redefining curriculum and instruction, Sage Publication Pvt.Ltd, New Delhi, 2000.
2. Gagnon Jr. George W. and Michelle Collay, Designing for learning six elements in constructionist classrooms, Sage Publication Pvt.Ltd, New Delhi, 2000.

#### **Reference Books:**

1. R.P. Vashist, Curriculum Research, Commonwealth Publishers, New Delhi, 2007
2. V.K. Rao, Principles of Curriculum, APH Publishing Corporation, New Delhi, 2005.
3. D.S. Srivastava, Sarita Kumari, Curriculum and Instruction, Isha Books, Delhi, 2007.
4. Navneet Bhalla, , Curriculum Development, Authorspress, Delhi, 2007

### **09ED319 EDUCATIONAL RESEARCH LAB**

#### **Credit: 0:0:2**

1. Identification of Research problems
2. Writing Hypotheses
3. Developing tools
4. Hypotheses testing : Parametric and non-parametric test
5. Writing interpretation
6. Writing reports
7. Writing Research proposal
8. Presenting research progress in the colloquium
9. Writing article reviews
10. Writing research articles

### **09ED320 COMPUTER APPLICATIONS IN RESEARCH**

#### **Credit: 0:0:2**

1. Fundamentals of Computers
2. MS office: MS Word, MS Excel, MS Access, MS Powerpoint

3. Basic Knowledge in working of SPSS: Measures of Central Tendency, Standard Deviation, Mean Deviation, 't' - Test, Correlation, 'F' - test

### **Experiments:**

1. **Ms Word:** Documentation – Edit – Insert picture – Create and Edit Tables
2. **Ms Excel:** Using formula: Average – Standard deviation – minimum – maximum
3. **Ms Excel:** Drawing Graphs
4. **Ms Access:** Creating Tables
5. **Ms Power point:** Preparing presentation
6. **SPSS:** Data Edit
7. **SPSS:** Measures of Central Tendency
8. **SPSS:** Standard deviation, Mean deviation
9. **SPSS:** 't' – test
10. **SPSS:** Product moment Correlation
11. **SPSS:** 'F' – test

### **09ED321 COGNITIVE PSYCHOLOGY**

**Credit: 4:0:0**

### **Objectives:**

To enable the learner to:

- 1 appreciate the contributions of cognitive Psychologists in facilitating the understanding of learning process.
- 2 consider various dimensions of intelligence while designing curriculum for the all round development of pupils
- 3 develop skill for fostering creativity among the pupils
- 4 develop a better understanding of how children develop and learn and how teachers and educators facilitate these processes.
- 5 undertake psychological research aimed at finding workable solutions to everyday educational problems

### **UNIT – I Evolution of Cognitive Psychology:**

Cognitive Psychology : Need and significance for the educational practitioners – Scope of Cognitive Psychology- significant contributors: Traditional: George Berkeley- David Hume- James Mill- John Stuart Mill 19<sup>th</sup> Century: Wilhelm Wundt- Hermann Helmholtz- Hermann Ebbinghaus- Edward Titchner- William James 20<sup>th</sup> Century: Edward Tolman- Wolfgang Kohler – Sirfredrick Bartlett- Skinner, - David Rumelhart- James Mc Clelland- George Miller- Allen Newel- The relevance of Cognitive Psychology in the management and in the design of instruction.

### **UNIT – II Cognitive Learning Theories:**

Cognitive Theories: Jean Piaget's Cognitive Development- Anderson's ACT-R theory – Gagne's condition of learning- Bruner's discovery learning- Asubel's meaningful learning- Bandura's

Social learning theory- Vigotsky's constructivism- Information Processing theory- their relevance to instructional design- Learning Styles

**UNIT- III Intelligence:**

Theories of Intelligence-Thompson Sampling theory, Vernon's hierarchical theory- Multiple Intelligence -Gardner's theory of multiple intelligence-Perceptual Skills- - Triarchic Intelligence- Emotional Intelligence – Spiritual Intelligence-History of Intelligence- measuring tools- Divergent thinking Vs Convergent Thinking

**UNIT – IV Creativity:**

Meaning – Process- Measures to foster Creativity in the learner-Nurturing and simulation of creativity-Theories of creativity-Taylor's level theory of creativity-Psychoanalytical theory of Creativity- Arieti's theory of creativity- Creativity tests

**UNIT –V Thinking and Language:**

Role of mental images in the thought process- Intuition- Reasoning- Extrasensory Perception-para normal thinking- Meta cognition – role of language in the thought process- factors affecting development of language- Lateral thinking – reflective thinking- Critical thinking

**Text Books:**

1. Mangal, S. K Advanced Educational Psychology, Prentice Hall of India Pvt Ltd, New Delhi 2007
2. Aggarwal J. C Essentials of Educational Psychology, Vikas Publishing House Pvt Ltd, New Delhi 2007

**Reference Books:**

1. Drisoll,M.P Psychology of learning for instruction, 2<sup>nd</sup> Needham Heights, MA: Allyn and Bacon, 2000.
2. Chuahan, S. S Advanced Educational Psychology, Vikas Publishing House Pvt Ltd, New Delhi 2003.

**09ED322 ADVANCEMENT IN SPECIAL EDUCATION AND REHABILITATION**

**Credit: 4:0:0**

**Objectives:**

To enable the learner to:

- 1 explain learning behaviors of children with disability
- 2 understand stages of development and will be able to make educational planning
- 3 appreciate the role of functionaries
- 4 develop devices using technology
- 5 aware about role of different agencies in this field.

**UNIT I: Definitions and learning behaviors of children with disabilities**

Revisiting concepts of impairment, handicap, activity limitation and disability, Definitions of disabilities as per the Persons with Disabilities (PWD) Act, Definitions of disabilities as per the National Trust (NT) Act, Incidence and prevalence of disability categories in India, Learning Characteristics of children with disabilities

**UNIT II Assessment, Educational Planning and psychological implications of disabilities**

Stages of development with reference to children with disabilities, Assessment for intervention and Educational Planning, Impact of various disabilities on personality, Theories of learning with reference to special needs children and their application in special education, Educational options for children with disabilities.

**UNIT III Curricular activities and teaching strategies**

Special skills necessary as a result of various disability conditions, Learning stages – Sensory motor, concrete operation and abstract thinking (logical operations), Compensatory instruction for concept development and learning, Methods of teaching various academic subjects to children with disabilities, Role of functionaries – head masters/ principles, teachers, class room teachers, parents and peers in the education of children with disabilities

**UNIT IV Assistive devices and adaptation of teaching learning materials**

Types of assistive devices, Use of technology in educating children with disabilities, General principles of material preparation duplication, modification, substitution and omission, Use of adapted instructional material for teaching and learning subjects like mathematics, science, social science etc, Creative arts and adapted physical education activities

**UNIT V Role of family, peer-group and community and achievement evaluation**

Awareness of development programmes in the community, Attitude of parents, teachers, siblings, peer group and attitude modification, Role of multi purpose rehabilitation workers and pare – professionals and linkages between education and rehabilitation professional, Techniques of guidance and counseling with reference to various disabilities, General strategies to evaluate the curricular and co-curricular activities.

**Text Books:**

1. S.K. Mangal Educating Exceptional Children, Prentice- Hall of India Private Limited, New Delhi, 2007
2. G. Lokanadha Reddy, Education of Children with special Needs, Discovery Publishing House, New Delhi, 2007

**Reference Books:**

1. James E. Ysseldyke, Special Education, Kanishka Publishers, Distributors, New Delhi, 2007.
2. S. Venkataiah, Special Education, Anmol Publications Pvt. Ltd, New Delhi, 2006.
3. Dr. R.A Sharma, Fundamentals of Special Education, Surya Publication, meerut, 2006.

**09ED901 INTERNSHIP TRAINING PROGRAMME**

**Credit: 0:0:1**

The M.Ed. students shall be undergoing internship training programme for 10 days to develop the self-instructional packages like CBI materials, Audio and Video production, and other e-learning software in the IT and Media based industries and submit the package along with the report.

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# **DEPARTMENT OF EDUCATION**

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## LIST OF REVISED AND NEW SUBJECTS

Code	Subjects	Credit
10ED201	Construction of Tests (Record)	0:0:1
10ED301	Psychology Practical	0:0:2

### 10ED201 CONSTRUCTION OF TESTS (Record)

**Credits: 0:0:1**

Each student should conduct a diagnostic test and an achievement test in both the optionals and submit the record.

1. Evaluation
  - ❖ Meaning, Definition and Types
  - ❖ Test and Measurement
  - ❖ Types of Test
  - ❖ Characteristics of Test
2. Diagnostic Test
  - ❖ Preparation
  - ❖ Administration
  - ❖ Error Analysis
  - ❖ Interpretation
  - ❖ Remedial Teaching
3. Achievement Test
  - ❖ Weightage of Objectives, Content and Questions
  - ❖ Blue Print
  - ❖ Question Paper
  - ❖ Scoring Procedure
  - ❖ Key
  - ❖ Standardization of test
4. Application of Statistics
  - ❖ Measures of Central Tendency - Mean, Median, Mode
  - ❖ Measures of Dispersion – Standard Deviation, Quartile Deviation
  - ❖ Rank Correlation
5. Graphical Representation
  - ❖ Frequency Curve
  - ❖ Frequency Polygon
  - ❖ Histogram
  - ❖ Ogive Curve



## 10ED301 PSYCHOLOGY PRACTICAL

**Credit: 0:0:2**

Each M.Ed. student should do any ten of the following psychology practicals and submit the record.

1. Emotional Intelligence Scale
2. Creativity Test
3. Interest inventory
4. Level of Aspiration
5. Adjustment inventory
6. Personality Test
7. Span of Attention
8. Memory Drum
9. Mirror Drawing
10. Human Maze
11. Anxiety
12. Problem Solving
13. Stress
14. Assertiveness
15. Self Esteem

## ADDITIONAL SUBJECTS

Code	Subjects	Credit
11ED201	Foundations of Education	3:0:0
11ED202	Psychology of Teaching and Learning - I	3:0:0
11ED203	Educational Technology	3:0:0
11ED204	Optional I: Methodology of Teaching Mathematics - I	3:0:0
11ED205	Optional I: Methodology of Teaching Physical Sciences - I	3:0:0
11ED206	Optional I: Methodology of Teaching Biological Sciences - I	3:0:0
11ED207	Optional I: Methodology of Teaching Computer Science - I	3:0:0
11ED208	Optional I: Methodology of Teaching Social Sciences - I	3:0:0
11ED209	Optional I: Methodology of Teaching Commerce - I	3:0:0
11ED210	Optional I: Methodology of Teaching English - I	3:0:0
11ED211	Optional II Methodology of Teaching English - I	3:0:0
11ED212	Educational Reforms in National Perspectives	3:0:0
11ED213	Psychology of Teaching and Learning - II	3:0:0
11ED214	Instructional Technology	3:0:0
11ED215	Optional I: Methodology of Teaching Mathematics - II	3:0:0
11ED216	Optional I: Methodology of Teaching Physical Sciences - II	3:0:0
11ED217	Optional I: Methodology of Teaching Biological Sciences - II	3:0:0
11ED218	Optional I: Methodology of Teaching Computer Sciences - II	3:0:0
11ED219	Optional I: Methodology of Teaching Social Sciences - II	3:0:0
11ED220	Optional I: Methodology of Teaching Commerce - II	3:0:0
11ED221	Optional I: Methodology of Teaching English - II	3:0:0
11ED222	Optional II: Methodology of Teaching English - II	3:0:0
11ED223	Educational Guidance & Counseling	3:0:0
11ED224	Educational Management	3:0:0
11ED225	Educational Measurement & Evaluation	3:0:0
11ED226	Environmental Education	3:0:0
11ED227	Optional I: Teaching Competency (Practical)	0:0:3
11ED228	Optional II: Teaching Competency (Practical)	0:0:3
11ED229	Optional I: Micro Teaching (Record)	0:0:1
11ED230	Optional II: Micro Teaching (Record)	0:0:1
11ED231	Construction of Tests (Record)	0:0:1
11ED232	Psychology Practical (Record)	0:0:1
11ED233	Case study and Action Research (Record)	0:0:1
11ED234	School Survey (Record)	0:0:1
11ED235	Physical Education and Health Education (Record)	0:0:1
11ED236	Community Service (Record)	0:0:1
11ED237	Educational Technology Lab (Record)	0:0:1
11ED301	Methodology of Educational Research and Statistics.	4:0:0
11ED302	Advanced Educational Technology	4:0:0
11ED303	Special Education	4:0:0
11ED304	Educational Planning and Administration	4:0:0
11ED305	Institutional Management	2:0:0
11ED306	Teaching Pedagogy	2:0:0
11ED307	Current trends in Higher Education	4:0:0

11ED308	Methodology of Research and Statistics	4:0:0
11ED309	Contemporary issues in Education and Educational Management	4:0:0
11ED310	Educational Media and Instruction	4:0:0

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## 11ED201 FOUNDATIONS OF EDUCATION

**Credits: 3:0:0**

### **Course Objectives:**

To enable the student teacher to understand:

- the philosophical & sociological foundations of education
- educational implications of schools of thought & contributions of philosophers
- role of education in social perspectives
- status of education in the Indian constitution

### **Outcomes:**

On completion of this course the student teacher will be able to analyze the philosophical & sociological foundations of education, Schools of Philosophy, contributions of philosophers, role of education in social perspectives and provisions of education in the Indian constitution.

### **Unit I**

**Education:** Education – narrow & broader meanings, Definitions, Aims of Education, Types of Education – Formal, Informal, Non Formal. Agencies of education – Formal & Informal agencies.

### **Unit II**

**Philosophical Foundations:** Philosophy, Educational Philosophy – Meaning, Definition and Branches of Philosophy - Relationship between Education and Philosophy, Schools of Philosophy - Idealism, Naturalism, Pragmatism, Realism.

### **Unit III**

**Contributions of Philosophers To Education:** Philosophy & Contributions of Rabindranath Tagore, Swami Vivekananda, Mahatma Gandhi, Sri Aurobindo Ghosh, Dr. S. Radhakrishnan, Froebel, Montessori, Rousseau, John Dewey, Paulo Freire.

### **Unit IV**

**Sociological Foundations:** Sociology, Educational Sociology - Meaning, Definitions, Aims and Scope. Social groups, Socialization, Social change, Social Evils, Social Stratification, Social Mobility, Education and Culture, Education and Democracy. Education for National Integration, Education for International Understanding

### **Unit V**

**Provisions of Education in the Indian Constitution:** Indian constitution - preamble, Articles related to education, Fundamental Rights and Duties, Universalization of Education, Wastage and Stagnation, Equality of Opportunities, Human Rights Education, Women Education.

### **Text Books:**

1. Ramesh G. & Dash B.N., Foundations of Education. Neelkamal Publications Pvt. Ltd., New Delhi, 2007.
2. Biranchi Narayan Dash, Teacher & Education in the Emerging Indian Society-vol-1 & vol 11 – Neelkamal Publications (P) Ltd., Hyderabad, 2007.

### **Reference Books:**

1. J. C. Aggarwal, Theory & Principles of Education, Vikas Publishing House PVT Ltd, New Delhi, 2007.
2. Taneja V.R., Education Thought and Practice, sterling publications, Sterling Publications, New Delhi, 2003.

## 11ED202 PSYCHOLOGY OF TEACHING AND LEARNING - I

**Credits: 3:0:0**

### **Course Objectives:**

To enable the student teacher to understand:

- the significance of psychological basis in education
- the pivots of psychological basis in education, learning experience, learning environment, learning process and the teacher in detail.
- the nature and scope of Psycho pedagogical approach to education.
- the principles of psycho pedagogical approach in classroom situation and education.

### **Outcomes:**

At the end of the course, the student will be able to identify the role of psychological principles in teaching –learning process, apply the role of psychological principles in teaching and learning.

### **Unit I**

**Introduction to Psycho Pedagogy:** Concept and definition of Educational psychology. Nature and Scope of educational psychology. Branches of Psychology. Applications of psychology to Education and their Implications for teaching.

### **Unit II**

**Human Growth and Development:** Meaning and principles of growth and development – Phases of Development – Stages of Development – Difference between growth and development —Maturation-Role of school in development of children . Heredity and Environment in the process of development.

### **Unit III**

**Cognitive Factors in Learning:** Cognitive process – Attention – Factors affecting attention – Span of Attention – Division of attention-Sensation and Perception – Characteristics, Organization and Principles of perception – Creativity – Bruner's Theory – Piaget's Cognitive Development.

### **Unit IV**

**Learning and Transfer of Training:** Nature and importance of Learning – Types of Learning – Theories of Learning – Thorndike, Pavlov, Skinner, Kohler and Gagne – Learning Curve – Transfer of Learning,– Remembering and Forgetting – Curve of Forgetting – Individual Differences in Learning.

### **Unit V**

**Role of Motivation in Learning:** Definition and concept of Motivation – Characteristics and classification of motivation –Hull’s Drive Reduction theory, Maslow’s Hierarchy of Needs – Achievement Motivation – Motivational strategies in the classroom – Level of Aspiration.

**Text books:**

1. S.K.Mangal, Advanced Educational Psychology, Prentice Hall of India Pvt. Ltd, New Delhi, 2005.
2. Nagarajan, K., Educational Psychology, Ram Publishers, Chennai, 2006.

**Reference books:**

1. S.S.Chauhan, Advanced Educational Psychology, Vikas Publishing House (P) Ltd, Noida, U.P. 2007.
2. Suresh Bhatnagar, Advanced Educational Psychology, Lal Books, Meerut, 2007.
3. J.C .Aggarwal, Essentials of Educational Psychology, Vikas Publishing House (P) Ltd, Noida, U.P. 2007.
4. R.A. Sharma, Development of learner and Teaching Learning process, Surya publications, Meerut, 2006.

**11ED203 EDUCATIONAL TECHNOLOGY**

**Credit: 3:0:0**

**Objectives:**

To enable the student teacher to understand:

- need and scope of Educational Technology
- models and strategies of teaching
- importance of communication techniques in education.
- recent trends in imparting education due to technological development.

**Outcomes:**

On completion of this course the student - teachers will recognize the need and scope of educational technology prepare and use different teaching aids in their teaching, develop lessons by using different models and strategies of teaching, analyse the classroom communication and improve their behavior, utilize the recent trends of educational technology in their teaching.

**Unit I**

**Educational Technology:** Educational Technology – Meaning, Definition - Nature and Scope – Types of Educational Technology: Hardware Approach, Software Approach and System Approach – Uses of Educational Technology in Teaching and Learning – Role of Teacher in Educational Technology

**Unit II**

**Teaching Aids:** Teaching aids –Principles of Using Teaching Aids - Classification of Teaching Aids – Projected Aids: Slide Projector, Filmstrip Projector, OHP, LCD Projector – Non-projected Aids :Graphic Aids, Charts , Display Boards, Models – Improvised Teaching Aids – Uses of Teaching Aids - Dale’s Cone of Experience

### **Unit III**

**Models of Teaching:** Models of Teaching: Meaning, Definition –Fundamental Elements – Uses of Models of Teaching– Types of Teaching Models – Teaching Strategies – Types of Strategy – Autocratic and Democratic Strategy

### **Unit IV**

**Communication:** Communication: Meaning, Types, Elements, Models, Networks and Barriers of Communication- Factors affecting communication – Classroom Communication: FIACS - RCS – ETC - RCEAS

### **Unit V**

**Recent Trends in Educational Technology:** Meaning and Applications of Multimedia – Educational Electronic Media – Radio, Television, CC Tv, Internet, Websites - Preparation of Lessons – Digital Conference – Role of Mass media in Education - EDUSAT

#### **Text Books:**

1. Dr. Vanaja. M. “Educational Technology”, Neelkamal Publications Pvt. Ltd., New Delhi, 2007.
2. J.C. Aggarwal, “Essentials of Educational Technology”, Vikas Publishing House Pvt. Ltd., Delhi, 2007.

#### **Reference Books:**

1. Kumar, K.L., “Educational Technology”, New Age International (P) Ltd., New Delhi, 2003.
2. R.A.Sharma, “Technological Foundation of Education”, R.Lall Book Depot, Meerut, 2005.
3. Dr. S.C.Rawat, “Essentials of Educational technology”, R. Lall Book Depot, Meerut, 2006.

## **11ED204 OPTIONAL I: METHODOLOGY OF TEACHING MATHEMATICS - I**

**Credit: 3:0:0**

#### **Objectives:**

To enable the student teacher to understand:

- the knowledge and the process of teaching mathematics.
- the process of curriculum construction in mathematics
- the process of evaluation in mathematics

#### **Outcomes:**

On completion of this course the student - teachers will know the history of mathematics and the contributions of different mathematicians, prepare the year plan, unit plan and lesson plan, evaluate the text book and develop the curriculum in mathematics, understand the concept of micro teaching, construct diagnostic test, achievement test and interpret the results.



## **Unit I**

**History and Background of Mathematics:** Mathematics: Meaning, Nature and values - Historical development of mathematics – Contribution of mathematicians: Euclid, Pythagoras, Bertrand Russell, Aryabhata, Bhaskaracharya, Brahmagupta, Rane Descartes and Srinivasa Ramanujam – Modern Mathematics – Understanding of modern mathematics – Importance and aims of Modern mathematics

## **Unit II**

**Aims, Objectives and Planning of Teaching Mathematics:** Aims and objectives of teaching mathematics – Instructional objectives – General and specific objectives - Planning – meaning, importance and purpose – Year plan, unit plan, lesson plan – Micro Teaching: Concept of Micro teaching.

## **Unit III**

**Methods and Techniques of Teaching Mathematics:** Methods of development in teaching Mathematics: Inductive, Deductive, Analytic, Synthetic - Methods of Teaching Mathematics: Laboratory, Heuristic, Problem Solving, Project method - Techniques of teaching mathematics – oral, written, drill, assignment, supervised study - Teaching aids – preparation and use of teaching aids.

## **Unit IV**

**Mathematics Curriculum:** Curriculum in Mathematics: Meaning, Principles of curriculum construction in mathematics, Development of a curriculum in mathematics – Existing Mathematics curriculum: Nature and Defects - Mathematics text book: characteristics of text book, appropriate use of text book, Mathematics text book evaluation

## **Unit V**

**Evaluation :** Measurement and Evaluation- Types of evaluation – Formative and summative – Diagnostic test- Remedial teaching - Achievement test – Construction of Achievement Test - Characteristics of a good test – Analysis and interpretation of scores: Mean, Median, Mode, Standard deviation and rank correlation – Concept of Comprehensive and Continuous Evaluation.

### **Text Books:**

1. Dr. A.K. Kulshreshtha, “Teaching of Mathematics”, R.Lall Book Depot, Near Govt. Inter College, Meerut, 2003.
2. Kulbir Singh Sidhu, “The Teaching of Mathematics”, Sterling Publishers Private Limited, New Delhi, 2006.

### **Reference Books:**

1. Dr.S.K. Mangal, “Teaching of Mathematics”, Tandon Publications, Books Market, Ludhiana, 2004.
2. Sudhir Kumar & D.N.Ratnalikar, “Teaching of Mathematics”, Anmol Publications Pvt. Ltd., New Delhi, 2007.
3. Manpal Singh, “Modern Teaching of Mathematics”, Anmol Publications Pvt. Ltd. New Delhi, 2006.

**Credits: 3:0:0**

**Objectives:**

To enable the student teacher to understand:

- the aims and objectives of teaching physical science.
- objective based instruction
- planning of instruction
- methods of teaching physical science
- curriculum construction
- evaluation & construction of tests

**Outcomes:**

On completion of this course the student teacher will be able to analyze the aims and objectives of teaching physical science, objective based instruction, planning of instruction, methods of teaching, curriculum construction, evaluation & construction of tests.

**Unit I**

Meaning and Scope of Science, Nature of Science (Product and Process), Aims of teaching Science, Development of Science Education in India.

**Unit II**

Taxonomy of Educational Objectives, Teaching Physical Sciences with reference to Bloom's Taxonomy, Objective Based Instruction, instructional objectives and specifications.

Micro Teaching, Core Teaching Skills in Science, Link Practice, Planning of Instruction - Importance of planning, Year plan, Unit plan and Lesson plan.

**Unit III**

Methods of Teaching Physical Science – Lecture Method, Demonstration Method, Historical and Biographical Approaches, Heuristic Method, Project Method, Problem Solving Method, Scientific Method, induction –deduction method, Dalton plan - Team Teaching.

**Unit IV**

Curriculum, Principles of Curriculum Construction, Activity Based Curriculum, Curriculum improvement projects in India (NCERT) and Abroad (PSSC,BSCS, CBA and Nuffield.),Types of curriculum – hidden curriculum, core curriculum, activity curriculum, concentric method and topic method of Curriculum Construction.

**Unit V**

Evaluation: meaning, types of evaluation - formative, summative, norm-referenced and criterion referenced. Grading, Marking. Construction of different types of test items- objective, short answer, essay. Construction of achievement test- blue print, scoring key, marking scheme. Characteristics of a good evaluation tool, item analysis- Difficulty index, Discrimination power.

**Text Books:**

1. Dr. T.K. Mathew, Dr. T.M. Mollykutty, Science Education Theoretical Bases of Teaching and Pedagogic Analysis, Rainbow Books Publishers, Kerala, 2006.

2. Dr. Vanaja.M, Methods of Teaching Physical Science, Neelkamal Publications Ltd, Hyderabad, 2007.

**Reference Books:**

1. Dr.Sankhala D.P, Teaching of Science, Adhyayan publishers, New Delhi, 2007
2. Dr. Sivarajan, Prof. A. Faziluddin, Science Education Methodology of Teaching and Pedagogic Analysis, Calicut University, Kerala, 2003.

**11ED206 OPTIONAL I: METHODOLOGY OF TEACHING  
BIOLOGICAL SCIENCES - I****Credits: 3:0:0****Objectives:**

To enable the student teacher to understand:

- the aims and objectives of teaching biological sciences.
- objective based instruction
- planning of instruction
- methods of teaching biological sciences
- curriculum construction
- evaluation & construction of tests

**Outcomes:**

On completion of this course the students will be able to analyze the aims and objectives of teaching biological sciences, objective based instruction, planning of instruction, methods of teaching, curriculum construction, evaluation & construction of tests.

**Unit I**

Meaning and Scope of Science, Nature of Science (Product and Process), Aims of teaching Science, Development of Science Education in India.

**Unit II**

Taxonomy of Educational Objectives, Teaching Biological Sciences with reference to Bloom's Taxonomy, Objective Based Instruction, instructional objectives and specifications. Micro Teaching, Core Teaching Skills in Science, Link Practice, Planning of Instruction - Importance of planning, Year plan, Unit plan and Lesson plan.

**Unit III**

Methods of Teaching Biological Sciences – Lecture Method, Demonstration Method, Historical and Biographical Approaches, Heuristic Method, Project Method, Problem Solving Method, Scientific Method, induction –deduction method, Dalton plan - Team Teaching.

**Unit IV**

Curriculum, Principles of Curriculum Construction, Activity Based Curriculum, Curriculum improvement projects in India (NCERT) and Abroad (PSSC,BSCS, CBA and Nuffield.),Types of

curriculum – hidden curriculum, core curriculum, activity curriculum, concentric method and topic method of Curriculum Construction.

### Unit V

Evaluation: meaning, types of evaluation - formative, summative, norm-referenced and criterion referenced. Grading, Marking. Construction of different types of test items- objective, short answer, essay. Construction of achievement test- blue print, scoring key, marking scheme. Characteristics of a good evaluation tool, item analysis- Difficulty index, Discrimination power.

### Text Books:

1. Dr.T.K. Mathew, Dr. T.M. Mollykutty, Science Education Theoretical Bases of Teaching and Pedagogic Analysis, Rainbow Books Publishers, Kerala, 2006.
2. Dr. Sudha Pahuja, Teaching of Biological Sciences, Neelkamal Publications Ltd, Hyderabad, 2007.

### Reference Books:

1. Dr.Sankhala D.P, Teaching of Science, Adhyayan publishers, New Delhi. 2007.
2. Dr. Sivarajan, Prof. A. Faziluddin, Science Education Methodology of Teaching and Pedagogic Analysis, Calicut University, Kerala, 2003.

## 11ED207 OPTIONAL I: METHODOLOGY OF TEACHING COMPUTER SCIENCE - I

**Credits: 3:0:0**

### Objectives:

To enable the student teacher to understand:

- the knowledge and the process of teaching Computer Science.
- the process of curriculum construction in Computer Science
- the evaluation process in computer science.

### Outcomes:

On completion of this course the student - teachers will recognize the role of curriculum in different levels of school, develop year, unit and lesson plan, know different methods of teaching, evaluate the computer science text book, evaluate the students learning and interpret the results

### Unit I

**Nature and Scope:** Brief history of development of computers – Nature and scope of computer science - Values of Computer science – Role of Computer Science in Primary, Secondary and Higher Secondary School Curriculum

### Unit II

**Aims, Objectives and Planning of Teaching Computer Science:** Aims and objectives of teaching Computer Science – Instructional objectives – General and specific objectives - Planning – meaning, importance and purpose – Year plan, unit plan, lesson plan – Micro Teaching: Concept of Micro teaching.

### Unit III

**Methods:** Methods of teaching computer science: Inductive and Deductive Methods, Analytic and Synthetic Method, Heuristic method, Laboratory method, Programmed Learning: linear and Branching method. Dynamic Methods of teaching computer science: Group Seminar, Symposium, panel discussion, workshop techniques, Project method.

### Unit IV

**Curriculum:** Curriculum in Computer Science: Meaning, Principles of curriculum construction in Computer science, Development of a curriculum in Computer Science – Existing Computer science curriculum: Nature and Defects – Computer Science text book: characteristics of text book, appropriate use of text book, Computer Science text book evaluation

### Unit V

**Evaluation:** Measurement and Evaluation- Types of evaluation – Formative and summative – Types of tests – diagnostic, prognostic and achievement tests (Special focus on Blue Print) - Characteristics of a good test – Analysis and interpretation of scores – Measures of central tendency, Measures of variation and rank correlation – CAE.

#### Text books:

1. U.K.Singh, “Computer Education”, Discovery Publishing House, New Delhi, 2007.
2. Dr.Y.K.Singh, “Teaching of Computer Science”, APH Publishing Corporation, New Delhi, 2005.
3. J.C. Aggarwal, “Essentials of Examination System”, Vikas Publishing House Pvt. Ltd., New Delhi, 2007.

#### Reference books:

1. Hemant Kumar Goyal, Teaching of Computer Science, R.Lall Book Depot, Near Govt. Inter College Meerut, 2004.
2. HasnainQureshi, Modern Teaching of Computer Science, Anmol Publications Pvt., Ltd, New Delhi, 2004.

## 11ED208 OPTIONAL I: METHODOLOGY OF TEACHING SOCIAL SCIENCES - I

**Credits: 3:0:0**

#### Objectives:

To enable the student teacher to understand:

- the need for learning History, Geography, Civics, Sociology and Economic.
- the basic principles governing the construction of a social science.
- the classroom skills needed for teaching of Social sciences using modern methodology.
- the ability to organize co-curricular activities and community resources for promoting social science learning.
- the knowledge, method and techniques of evaluation and preparation of question in social sciences.

#### Outcomes:

At the end of the course, the student will develop the skills to teach social sciences using modern methodology; apply the techniques for preparation of Question paper.

### **Unit I**

**Introduction to Teaching Social Sciences:** Nature and Objectives of Teaching Social sciences – Need for teaching the subjects History, Geography, Civics, Sociology and Economics under Social sciences in schools – Place of social sciences in secondary school curriculum – Concept of Social Studies – Differences between Social sciences and social studies.

### **Unit II**

**Curriculum of Social Sciences:** Meaning, objectives and importance of social science curriculum – Factors influencing curriculum design - Principles of designing social sciences curriculum – Components of social sciences curriculum – Approaches to organizing social sciences curriculum in terms of correlation, integration, concentric, spiral, unit and chronological approaches – Recommendations of Kothari Commission and NCERT's Curriculum Framework (2000).

### **Unit III**

**Instructional Methods for Teaching Social Sciences:** Need for different Instructional strategies – Methods and Models of Instructional strategies – Teacher directed instructional strategies: Lecture, Demonstration, Guest Speakers and Questioning – Learner directed instructional strategies: individualized instruction, programmed instruction, computer assisted instruction, project work and field work – Group directed instructional strategies: Discussions, Debate, Symposium, Panel Discussion and Brainstorming.

### **Unit IV**

**Instructional Process in Teaching Social Sciences:** Meaning and different components of instructional process – Instructional Plan – Areas of Instructional Plan: Teaching-learning strategies, objectives, learning alternative and evaluation, content, concepts, processes, values – Types of Planning: Lesson, Unit and Year plans – Micro teaching lesson plans.

### **Unit V**

**Evaluation in Teaching Social Sciences:** Meaning, Characteristics and Purposes of evaluation in social sciences – Aspects of Evaluation: Formative and Summative Evaluation, Evaluation of cognitive and non-cognitive outcomes, Tools of evaluation in social sciences, Teacher made tests and standardized tests – Construction and standardization of Question paper: Content analysis, writing instructional objectives in behavioral terms, Preparing a Blueprint, Developing test items for cognitive and non-cognitive outcomes, Setting a good question paper – Assessing students' performance: Quantitative assessment (marking), Qualitative assessment (grading) and Qualitative interpretation of students' performance.

### **Text Books:**

1. Sharma, R.A., Teaching of Social Sciences, R. Lall Book Depot, Meerut, 2006.
2. Aggarwal, J.C., Teaching of Social Studies: A Practical Approach (4<sup>th</sup> Edition). Vikas Publishing House Pvt. Ltd. New Delhi, 2007.

### **Reference Books:**

1. Saxena, Mishra, Mohanty, Teaching of Social Science, Vinay Rakheja publishers, Meerut, 2005.

2. Mangal .S. K., Teaching of Social Studies, PHI Learning Private Ltd., New Delhi, 2005.
3. Aggarwal, J.C., Essentials of examination system, Vikas Publishing House Pvt. Ltd. New Delhi, 2005.

## **11ED209 OPTIONAL I: METHODOLOGY OF TEACHING COMMERCE I**

**Credits: 3:0:0**

### **Objectives:**

To enable the student teacher to understand:

- the nature and scope of Commerce and Accountancy education.
- the aims and objectives of teaching commerce and accountancy
- to develop micro teaching skills and understand the different methods, skills and techniques of teaching.
- the preparation and use of audio visual aids in commerce teaching.
- to implement the methods of evaluation, construct and administer the achievement and diagnostic tests.

### **Outcomes:**

At the end of the course, the student will evaluate commerce and accountancy education, applications of micro teaching skills and audio visual materials in teaching process

### **Unit I**

**Commerce Education –Introduction:** Significance, Meaning, Nature and scope of commerce and Accountancy education– development of commerce curriculum in Tamil Nadu: practical, social, cultural, moral, disciplinary and vocational values of teaching commerce and accountancy.

### **Unit II**

**Aims And Objectives of Teaching Commerce and Accountancy:** Aims and Objectives of teaching commerce and accountancy subjects – base for the development of the Objectives through the appropriate learning experience-Bloom’s Taxonomy of educational Objectives-classroom objectives of teaching commerce general instructional objectives and specific learning outcomes relating to the objective cognitive, affective and psychomotor domains..

### **Unit III**

**Micro Teaching and Methods of Teaching Commerce and Accountancy:** Micro and Macro teaching – Need for micro teaching – components – skill of explaining, stimulus variation, blackboard writing, reinforcement, illustrating with examples-advantages of micro teaching. Traditional methods – lecture, demonstration and project method. Modern methods-team teaching, seminar, symposium, workshop, debate, panel discussion and group discussion.



#### **Unit IV**

**Audio Visual Aids:** Instructional Aids – Need ,Uses and Kinds – Audio Visual Aids and their merits-Visual Aids –Text books, Black board, Charts, Models, Collected forms and statements from bank ,LIC and Other financial Institutions-Projective Aids; Film, OHP ,Audio-Aids: Tape-Recorder-Field- trips, commerce club, , Exhibition, School co- operative society etc.

#### **Unit V**

**Evaluation:** Evaluation- concept – measurement and evaluation-types of Evaluation –formative, Summative, Norm-referenced and criterion referenced tests. Tests-achievement and Diagnostic-blue print-construction, administration, evaluation and interpretation- item analysis- Measures of central tendency and rank correlation.

#### **Text Books**

1. Aggarwal .J.C , Teaching of commerce, Vikas publishing house, Pvt Ltd, New Delhi, 2007.
2. Singh, R.P., Teaching of commerce, Surya publications, Meerut, 2007.

#### **Reference Books:**

1. Khan.M.S. The teaching of commerce, Sterling Publishers, New Delhi, 2005.
2. Mangal. S. K. Advanced Educational Technology, Tandon Publication, Ludhiana, 2004.
3. Aggarwal J.C., Essentials of Educational Technology, Vikas publishing house Pvt Ltd,New Delhi, 2007.

### **11ED210 OPTIONAL I: METHODOLOGY OF TEACHING ENGLISH - I**

**Credits: 3:0:0**

#### **Objectives:**

To enable the student teacher to understand:

- to acquire knowledge of the sound system in English and to familiarize them with the appropriate terminology to describe the sounds in English.
- the connections of English speech and to acquire good pronunciation and fluency of speech.
- to acquire a working knowledge of various aspects of Modern English Grammar and usage at the Higher Secondary level.
- to develop the reference skills.

#### **Outcomes:**

At the end of the course the student will develop his/her communication skills.

#### **Unit I**

**Phonetics of English:** The different speech organs and their role - vowels and consonants-their place and manner of articulation - The concept of the phoneme and the allophone - Phonetic transcription - Stress-word stress and sentence stress.

#### **Unit II**

**Fluency:** Use of conventional formulas – Greeting, apology, invitation, refusal, accepting, thanking – Describing and interpreting pictures, tables, graphs, maps etc., - Telling stories and narrating incidents – Play reading and Dramatization – Debates and Interviews.

### **Unit III**

**Lexis:** Word formation – Affixation – Conversion – Compounding – Other minor devices – Patterns of spelling – Phrasal verbs and prepositional phrases.

### **Unit IV**

**Advanced Grammar:** The noun phrase – MHQ (Modifier, Headword, Qualifier) – The verb phrase – Tense forms – Auxiliary verbs – Modals. The sentences – Types of sentences - Voice and reported speech - Sentences: Simple, compound and complex.

### **Unit V**

**References and Study Skills:** Dictionary skills – SQ3R methods of Reading – Use of library and Reference work – Bibliography and Annotated Bibliography.

#### **Text Books:**

1. M.S. Bhatnagar, “Phonetics and Grammar”, Alfa Publications, New Delhi, 2007.
2. Dr. Kalyan Pandey, “Fundamentals of English Linguistics and Phonetics”, Indian Publishers Distributors, New Delhi, 2000.

#### **Reference Books:**

1. Dr. Y.K. Singh, “Teaching of English”, APH Publishing Corporation, 2007.
2. Krishna Mohan, Meera Baneji, “Developing Communication Skills”, Macmillan India Ltd, 2007.

## **11ED211 OPTIONAL II: METHODOLOGY OF TEACHING ENGLISH - I**

**Credits: 3:0:0**

#### **Objectives:**

To enable the student teacher:

- to familiarize the teacher – trainees with the various aspects of the B.Ed. Programme with special reference to the nature of the language skills to be developed.
- to train student teachers in strategies and current techniques of English teaching.
- to foster the habit of examining syllabi and teaching materials.
- to enable the teacher trainees to acquire

#### **Outcomes:**

At the end of the course the student acquires an understanding of role, nature, status and rationale for learning English.

### **Unit I**

**Preliminary Statement:** The role of English in India today – Teaching the four basic skills – listening – speaking – reading – writing. Learning the mother tongue and learning a second

language – interference and Transfer from the mother tongue –Implications for teaching methods, Objectives of Teaching English at the Secondary level.

## **Unit II**

**Teaching Skills:** Bloom’s Taxonomy of Educational Objectives – cognitive, Affective and Psychomotor domains – General and specific Instructional objectives. Micro teaching – Principles and Skills,

## **Unit III**

**Methods and Approaches:** Methods – Grammar – Translation – Bilingual – Direct – Situational –Oral – Structural – Communicative method. Approaches – Notional – Situational – Skill based – Communicative syllabus., recent methods, humanistic approaches, suggestopedic, dictogloss, total physical response, community language teaching, ALM method .

## **Unit IV**

**Teaching of English:** Lesson plan – teaching prose - teaching of vocabulary – active and passive vocabulary – vocabulary island – content words and structural words – criteria for selection of vocabulary – Teaching aids – Teaching poetry – Teaching grammar.

## **Unit V**

**Evaluation:** Evaluation, types of evaluation, Construction of different types of test items-objective, short answer, essay. Construction of achievement test- blue print, Characteristics of a good test – objectivity – Reliability – Validity – Feasibility, Graphical representation – Measures of central tendency - Measures of variability – Correlation. Testing of oral skills – pronunciation and fluency – Testing grammar and usages – Testing reading comprehension – Testing vocabulary – Testing writing skills.

### **Text Books:**

1. Krishna Mohan, Meera Baneji, “Developing Communication Skills”, Macmillan India Ltd, 2007.
2. English Language Education, Source Book for the Diploma in Teacher Education.

### **Reference Books:**

1. Dr. Y.K. Singh, “Teaching of English”, APH Publishing Corporation, 2007.
2. Dr. N.L.N. Jayanthi, “Teaching of English” Mrs. Kamala Prasad, Annamalainagar, Tamilnadu, 2008.

## **11ED212 EDUCATIONAL REFORMS IN NATIONAL PERSPECTIVES**

**Credits: 3:0:0**

### **Objectives:**

To enable the student teacher to understand:

- the role of nation in bringing out reforms in the field of education.
- the education at different levels.
- different boards of education.
- the development of education in India.

**Outcomes:**

At the end of the course the learner will discriminate education before and after independence and will comprehend the role of teachers in the Indian society.

**Unit I**

**Education Before Independence:** Vedic Education – Buddhist Education – Islam Education - Charter of 1813, Macaulay's Minutes 1835 - Filtration Theory, Woods Despatch 1854– Education Wardha Scheme of Education (1937)– Impact of English Education in India.

**Unit II**

**Education After Independence:** Radhakrishnan commission (1948) – Mudaliar Commission (1952-53) – Kothari Commission (1964-66) – National Policy on Education (1986) – Revised National Policy on Education (1992) – Yespal Committee (1993) – National Curriculum Framework 2000 - National Curriculum Framework 2005.

**Unit III**

**Boards of Education:** Statutory Boards – CBSE, ICSE, Anglo Indian, Matriculation, State board – National Education Bodies - NCTE, NAAC, NCERT, UGC, ICSSR, AICTE, , ICAR, Equitable Syllabus.

**Unit IV**

**School Education in India:** Community Schools – Neighbourhood Schools – SMART Schools – School Complex – Navodhaya Vidhyalaya – Kendra Vidhyalaya – Sainik School – Defence Academies – De: Schooling –Distance Education – Open learning and Virtual Classes

**Unit V**

**Teacher Education:** Teacher Education – Meaning – Aims – Objectives - Role of Teachers in the emerging Indian Society – Accountability of Teachers – Competency based Teacher Education – Pre service Education – In-Service Teacher Education.

**Text Books:**

1. Agarwal J.C. & S.P.Agarwal, Educational and Social Upliftment of Backward Classes, Concept Publications, 2001.
2. Bhatnagar,S., Indian Education Today and Tomorrow, Loyal Book Depot, Meerut, 2000.

**Reference Books:**

1. Thankachan. T. C. Philosophical and Sociological Bases of Education, Aaromal Group, Kerala, 2006.
2. Aggarwal, J.C. Theory and Principles of Education, Vikas Publishing House Pvt. Ltd, 2000.

**11ED213 PSYCHOLOGY OF TEACHING AND LEARNING – II**

**Credit: 3:0:0**

**Objectives:**

To enable the student teacher to understand:

- the nature of intelligence and personality

- the measurement and interpretation of psychological tests
- the guidance and counseling in education
- the role of the teacher in promoting mental health and hygiene

### **Outcomes:**

At the end of the course, the student will understand the Personality and Intelligence, theories and their implications to education, Construct and administer Psychological tests and evaluation, Apply the method of psychological tests in classroom situation, apply the concept of guidance and counseling, mental health and hygiene in the classroom.

### **Unit I**

**Personality Theories and Tests:** Meaning and Definitions of Personality – Major determinants of personality – Theories of Personality: Psychoanalytic and Phenomenological theory – Assessment of Personality- role of school in personality development.

### **Unit II**

**Intelligence Theories and Tests:** Meaning and definition of intelligence – Theories of Intelligence – Single, Two Factor and Multi Factor Theories – Guilford's Structure of Intellect – Emotional Intelligence, Multiple Intelligence – Individual differences in Intelligence – Intelligence Tests and their uses.

### **Unit III**

**Psychological Tests Construction and Measurement:** Meaning and concept of tests – Characteristics and construction of standardized psychological tests – Types of psychological tests, Uses and limitations of psychological tests – Methods of psychological tests: online, paper-pencil and apparatus methods.

### **Unit IV**

**Mental Health and Mental Hygiene :** Meaning and definition of Conflict and Frustration – Concept of Adjustment – Causes of Maladjustment – Symptoms of Maladjustment, Defense Mechanisms – Problem Children – Concepts of Mental Health and Mental Hygiene.

### **Unit V**

**Guidance and Counseling:** Meaning and Definitions of Guidance and Counseling – Difference between Guidance and Counseling – Need and Types of guidance & counseling: Educational, Vocational and personal – Identification of individual with counseling needs – Counseling techniques – Individual and group techniques.

### **Text Books:**

1. J.C .Aggarwal, Essentials of educational Psychology, Vikas Publishing House (P) Ltd, Noida, U.P., 2007.
2. Nagarajan, K, Educational Psychology, Ram Publishers, Chennai, 2006 .

### **Reference Books:**

1. S.K.Mangal, , Advanced Educational Psychology, Prentice Hall of India Pvt. Ltd, New Delhi,2006.
2. S.S.Chauhan,, Advanced Educational Psychology, Vikas Publishing House (P) Ltd, Noida, U.P.,2007.

3. Suresh Bhatnagar, Advanced Educational Psychology, Lal Books, Meerut, 2007
4. R.A. Sharma, Development of learner and Teaching Learning process, Surya publications, Meerut, 2006.

## 11ED214 INSTRUCTIONAL TECHNOLOGY

**Credits: 3:0:0**

### **Objectives:**

To enable the student teacher to understand:

- the meaning and significance of Instructional Technology.
- to relate instructional objectives to Instructional Technology.
- to assess the relative effectiveness among different instructional development models.

### **Outcomes:**

On completion of this course the student - teachers will recognize the concept of instructional technology, know different models of instructional development, know instructional design and techniques, evaluate the instruction

### **Unit I**

**Introduction to Instructional Technology:** Instructional Technology: Meaning, definition and scope – ABCD Method of writing instructional objectives – Blooms Taxonomy of Instructional Objectives - Process of Instructional Technology – Procedures involved in need assessment and task assessment.

### **Unit II**

**Models of Instructional Development:** Instructional Development model: Elements - Kemp Model – Instructional Development Institute Model – Criterion Reference Instructional Model – ISD Model.

### **Unit III**

**Instructional Design and Techniques:** Stages of instructional designs – Instructional designs: objective based, skill-based, computer based and learning style based – Instructional Technology for large groups: symposium, panel discussion, team teaching and project approach – Instructional technology for small groups. Simulation approach, role-play, buzz group technique, brainstorming and case discussions.

### **Unit IV**

**Individualized Instructional Techniques:** Individualized Instruction: Meaning and significance – Tutorials, Mastery learning & Keller Plan – Programmed instruction: nature, types and development – Development and validation of programmed instruction

### **Unit V**

**Instructional Evaluation and Remedial Teaching:** Measurement and Evaluation in Education: Meaning and significance – Criterion referenced and norm-referenced test – Innovations in educational evaluation: Choice Based Credit System, Grading and Semester Systems, Question Banking and Computerized test construction and administration – Diagnostic testing and Remedial teaching.

**Text Books:**

1. Fredrick G.Knirk, Instructional Technology, Saunders Coolege Publishing, Sydney, 2006.
2. Dr. Vanaja. M. “Educational Technology”, Neelkamal Publications Pvt. Ltd., New Delhi, 2007.
3. R.A.Sharma, “Technological Foundation of Education”, R.Lall Book Depot, Meerut, 2005.

**Reference Books:**

1. Kumar, K.L. “Educational Technology”, New Age International (P) Ltd., New Delhi, 2003.
2. Dr. S.C.Rawat, Essentials of Educational technology”, R. Lall Book Depot, Meerut, 2006.
3. J.C. Aggarwal, “Essentials of Educational Technology”, Vikas Publishing House Pvt. Ltd., Delhi, 2007.

**11ED215 OPTIONAL I: METHODOLOGY OF TEACHING MATHEMATICS II****Credits: 3:0:0****Objectives:**

To enable the student teacher to understand:

- the Psychology of teaching and learning mathematics.
- to apply the models of teaching in teaching mathematics
- the pedagogical analysis in mathematics
- the process of research in mathematics education.

**Outcomes:**

On completion of this course the student - teachers will recognize the factors influencing in learning mathematics, develop lessons by using different models of teaching mathematics, do pedagogical analysis of the content in mathematics, know different techniques to develop interest in learning mathematics, do action research in mathematics.

**Unit I**

**Psychology of Learning Mathematics:** Psychology of learning Mathematics- Formation of mathematical concepts- the ideas of Piaget and Bruner - Factors influencing in learning Mathematics: Motivation, perception, attitude and aptitude- Divergent thinking in teaching mathematics – Role of Intuition in teaching and Learning Mathematics.

**Unit II**

**Models of Teaching Mathematics:** Models of teaching mathematics –Meaning - Concept attainment model, advanced organizing model, Inquiry training model - Multiple Intelligence Activity Based Teaching (MIABT) - Enrichment Programmes for the gifted – Backwardness in Learning Mathematics - Remedial Teaching.



### **Unit III**

**Pedagogical Analysis in Mathematics:** Pedagogical Analysis of the contents in Mathematics – Meaning – Component and operations involved in the task of pedagogical Analysis - pedagogical Analysis of a few topics / units in the subject mathematics – sets, congruency, area, volume, ratio, proportion and Equations.

### **Unit IV**

**Arousing Interest in Teaching Mathematics:** Arousing and Maintaining Interest in Teaching Mathematics – Role of Puzzles, Riddles and Games in Teaching Mathematics – Meaningful learning in mathematics – Principles of Meaningful learning in mathematics- Mathematics Club – organization of mathematics club

### **Unit V**

**Research in Mathematics:** Research – Meaning – Characteristics of Research – Needs of research in mathematics – Defects in the Present day Teaching Mathematics - Action Research in Mathematics – Steps of Action research – Importance of Action Research.

#### **Text Books:**

1. Dr. A.K., “Teaching of Matheamtics”, R.Lall Book Depot, Near Govt. Inter College, Meerut, 2003.
2. J.C. Aggarwal, “Essentials of Educational Technology”, Vikas Publishing House Pvt. Ltd., Delhi, 2007.
3. J.C. Aggarwal, “Essentials of Educational Psychology”, Vikas Publishing House Pvt. Ltd., Delhi, 2007.

#### **Reference Books:**

1. Dr.S.K. Mangal, “Teaching of Mathematics”, Tandon Publications, Books Market, Ludhiana, 2004.
2. Sudhir Kumar & D.N.Ratnalikar, “Teaching of Mathematics”, Anmol Publications Pvt. Ltd., New Delhi, 2007.
3. Kulbir Singh Sidhu, “The Teaching of Mathematics”, Sterling Publishers Private Limited, New Delhi, 2006.

## **11ED216 OPTIONAL I: METHODOLOGY OF TEACHING PHYSICAL SCIENCES II**

**Credits: 3:0:0**

#### **Objectives:**

To enable the student teacher to understand:

- the models of teaching science
- resource materials in teaching science
- AV aids & support materials in science teaching
- importance of professional growth of science teachers

#### **Outcomes:**

On completion of this course the student will be able to analyze the models of teaching science, resource materials, AV aids & support materials in science teaching and professional growth of science teachers.

### **Unit I**

**Models of Teaching Science:** Models of teaching, Families – Social Interaction Model, Personal Model, Information processing Model and Behaviour Modification Model - Basic elements of Families–Illustrations with lesson plans.

### **Unit II**

**Resource Materials in Teaching Science:** Science textbook - Qualities of a good Science textbook, Evaluation of textbook, Advantages, Limitations. Resource Unit, Hand book for teachers and Workbook for pupils, Reference Books and Supplementary Readers.

### **Unit III**

**Av Aids in Science Teaching:** Audio- Visual materials, Importance of AV aids, Principles for the selection and use of AV aids , Types of AV aids- projected aids, non projected aids, Hardware & Software devices, Improvised aids, internet, e learning, teleconferencing, EDUSAT, blue tooth.

### **Unit IV**

**Support Materials in Science Teaching:** Organization, maintenance & importance of - Science Library, Science Laboratory, Science clubs, Science exhibitions and fairs, fieldtrips and excursions.

### **Unit V**

**Teacher & Professional Growth:** Qualities & Competencies of a science teacher, Duties and responsibilities, professional ethics, professional organisations, professional growth-pre service education, inservice education, role of SCERT & NCERT for professional enrichment.

### **Text Books:**

1. Dr.T.K. Mathew, Dr. T.M. Mollykutty, Science Education Theoretical Bases of Teaching and Pedagogic Analysis May 2006.
2. Dr. Vanaja.M, Methods of Teaching Physical Science, Neelkamal Publications Ltd, Hyderabad, 2007.

### **Reference Books:**

1. Dr.Sankhala D.P, Teaching of Science, Adhyayan publishers, New Delhi. 2007.
2. Dr. Sivarajan, Prof. A. Faziluddin, Science Education Methodology of Teaching and Pedagogic Analysis. 2003.

## **11ED217 OPTIONAL I: METHODOLOGY OF TEACHING BIOLOGICAL SCIENCES II**

**Credits: 3:0:0**

### **Objectives:**

To enable the student teacher to understand:

- the models of teaching science
- resource materials in teaching science
- AV aids & support materials in science teaching
- importance of professional growth of science teachers

**Outcomes:**

On completion of this course the student will be able to analyze the models of teaching science, resource materials, AV aids & support materials in science teaching and professional growth of science teachers.

**Unit I**

**Models of Teaching Science:** Models of teaching, Families – Social Interaction Model, Personal Model, Information processing Model and Behaviour Modification Model - Basic elements of Families–Illustrations with lesson plans.

**Unit II**

**Resource Materials in Teaching Science:** Science textbook - Qualities of a good Science textbook, Evaluation of textbook, Advantages, Limitations. Resource Unit, Hand book for teachers and Workbook for pupils, Reference Books and Supplementary Readers.

**Unit III**

**Av Aids in Science Teaching:** Audio- Visual materials, Importance of AV aids, Principles for the selection and use of AV aids , Types of AV aids- projected aids, non projected aids, Hardware & Software devices, Improvised aids, internet, e learning, teleconferencing, EDUSAT, blue tooth.

**Unit IV**

**Support Materials in Science Teaching:** Organization, maintenance & importance of - Science Library, Science Laboratory, Science clubs, Science exhibitions and fairs, fieldtrips and excursions.

**Unit V**

**Teacher & Professional Growth:** Qualities & Competencies of a science teacher, Duties and responsibilities, professional ethics, professional organisations, professional growth-pre service education, inservice education, role of SCERT & NCERT for professional enrichment.

**Text Books:**

1. Dr.T.K. Mathew, Dr. T.M. Mollykutty, Science Education Theoretical Bases of Teaching and Pedagogic Analysis May 2006.
2. Dr. Sudha Pahuja, Teaching of Biological Sciences, Neelkamal Publications Ltd, 2007.

**Reference Books:**

1. Dr.Sankhala D.P, Teaching of Science, Adhyayan publishers, New Delhi. 2007.
2. Dr. Sivarajan, Prof. A. Faziluddin, Science Education Methodology of Teaching and Pedagogic Analysis. 2003.

**11ED218 OPTIONAL I: METHODOLOGY OF TEACHING COMPUTER SCIENCE II**

**Credits: 3:0:0**

## **Objectives:**

To enable the student teacher to understand:

- the role of computer laboratory in teaching Computer Science.
- the knowledge of recent trends and innovations in Computer Science teaching.
- to develop the skill of developing the courseware for CBI
- to acquire the knowledge of software tools for teaching computer science.

## **Outcomes:**

On completion of this course the student - teachers will design and maintain a computer laboratory for teaching computer science, recognize the recent trends in computer science teaching, develop individualized learning, develop and evaluate the courseware, utilize the different software tools in their teaching.

## **Unit I**

**Role of Computer Laboratory in Computer Science Teaching:** Computer Science Laboratory – Importance of Laboratory Design – Lecture Room cum Lab Plan – Organization of Practical work : Administration, grouping of pupils, Instruction to pupils, discipline in the lab – Care and Maintenance of Hardware and Software in the Computer Science Laboratory – Apparatus – Stock Registers.

## **Unit II**

**Recent Trends in Computer Science Teaching:** Computer Science Club: Need, Importance and Organisation - Role of e-club in teaching computer science – Computer science Library – e-Library – Simulation Based Learning – Computer Game Based Learning - Multiple Intelligences and Computer Science teaching and Learning

## **Unit III**

**Innovations in Computer Science Teaching and Learning:** Individualized Instruction - Programmed Learning: Meaning, Principles and Types – CBI - CAI – CML – Internet - WBI - e-Learning – Constructivism in e-learning – Theories of e-Learning – Interaction in e-Learning – Model of e-Learning – Teaching Methods in e-Learning – Qualities of the e-teacher.

## **Unit IV**

**Design and Development of CBI Courseware:** Courseware – writing objectives – task analysis – media selection – development styles and screen design – testing and evaluation – integrated unitized package – implementation of software – criteria for evaluation of a courseware

## **Unit V**

**Computer Science Teaching with Software Tools:** Basic Software Tools – Word Processing Software, Spreadsheet software, Database Software, Graphic Software in teaching and learning – Software tools in Classroom: Productivity and Teaching Strategies – Recent Developments in Software Tools.

## **Text Books:**

1. M.D. Roblyer, 2008, Integration of Educational Tecchnology in to teaching, University of Maryland University College.

2. Dr. Anurag, Computer Based Instruction, Indira Gandhi National Open University, Noida, 2008.
3. Y.K.Singh, Teaching of Computer Science, APH Publishing Corporation, New Delhi, 2005.

**Reference Books:**

1. P.P. Singh E-Learning, Deep & Deep Publications Pvt. Ltd., New Delhi, 2005.
2. JC Aggarwal, Essentials of Educational Technology, Vikas Publishing House Pvt. Ltd., New Delhi, 2007.
3. Hasnain Qureshi, Modern Teaching of Computer Science, Anmol Publications Pvt.Ltd, New Delhi, 2004.

**11ED219 OPTIONAL I: METHODOLOGY OF TEACHING SOCIAL SCIENCES II****Credits: 3:0:0****Objectives:**

To enable the student teacher to understand:

- the Institution's responsibilities to enhance teaching and learning of social sciences.
- to develop knowledge about the content prescribed for social sciences in Schools.
- the recent trends in teaching social sciences using some innovative teaching methods in Schools.
- modern Aids and different types of Educational Media need for teaching social sciences effectively.
- the role of information and communication technology and its applications in teaching social sciences.

**Outcomes:**

At the end of the course, the student will identify the cultural importance of church, mosque, temples, organize guest lectures and implement various modern technologies in teaching

**Unit I**

**Role of Institution in Teaching Social Sciences:** Arranging and organizing field trips to places of cultural importance like Temples, Church, Mosques and other Monumental places – Role of Social Sciences Laboratory – Establish Social Sciences Club – Conducting cultural competitions and awareness campaigns – School Participation in societal issues – Arranging guest lectures by eminent social scientist.

**Unit II**

**Recent Trends in Teaching Social Sciences:** Activity Based Learning (ABL) method – Active Learning Method (ALM) – Multiple Intelligences in teaching social sciences – Constructivism and Teaching Social Sciences – Research findings in the areas of teaching Social sciences – Need for updating the content of social sciences.

**Unit III**

**Educational Aids and Media in Teaching Social Sciences:** Need and Role of instructional Aids and Media – Print Media: Magazines, Journals, Newspapers, Workbook, Research Reports, Historical documents – Electronic Media: TV, Radio, Cinema, Internet, Satellite, Edusat – Modern Equipments: OHP, Slide projectors, Globe, Computers with accessories.

#### **Unit IV**

**Teacher & Professional Growth:** Qualities & Competencies of a social science teacher, Duties and responsibilities, professional ethics, professional organisations, professional growth-pre service education, inservice education, role of SCERT & NCERT for professional enrichment.

#### **Unit V**

**Teaching Social Sciences in Future:** Role of ICTs in Teaching Social sciences – Teaching Social Sciences through Online: Digital conferencing, e-Learning, e-Teaching, e-Content – Role of Technology Integration in Teaching Social sciences – Role of Net Forum and Weblog in Teaching social sciences.

#### **Text Books:**

1. Sharma, R.A., Teaching of Social Sciences, R. Lall Book Depot, Meerut, 2005..
2. Aggarwal, J.C. , Teaching of Social Studies: A Practical Approach (4<sup>th</sup> Edition). Vikas Publishing House Pvt. Ltd. New Delhi, 2005.

#### **Reference Books:**

1. Robyler, M.D, Integrating Educational Technology into Teaching, Pearson Prentice Hall, New York, 2008.
2. Saxena, Mishra, Mohanty,, Teaching of Social Science, Vinay Rakheja publishers, Meerut,2005.
3. Mangal. S. K., ,Teaching of Social Studies, PHI Learning Private Ltd., New Delhi, 2005.

### **11ED220 OPTIONAL I: METHODOLOGY OF TEACHING COMMERCE II**

**Credits: 3:0:0**

#### **Objectives:**

To enable the student teacher to understand:

- the various communication techniques in classroom teaching and recent technological innovations in communication system.
- competency in teaching accountancy in special areas
- different types of business enterprises.
- models of teaching and classroom climate.
- qualities of a good teacher and evaluating teaching.

#### **Outcomes:**

At the end of the course, the student will apply various communication techniques in classroom teaching and recent technological innovations in communication system, develops the competency in teaching accountancy in special areas and understand the different types of business enterprises.

## **Unit I**

**Approaches and Systems of Communication:** Communication-principles and barriers of communication – principles of modern communication informal and non-formal learning situation – various stages in modern communication system – mass media approaches to education – different media-multimedia – internet and E-commerce.

## **Unit II**

**Modern Accounting System:** Preparation of cash book- simple, double and triple column cash book – teaching of contra entry – explaining skill involved in Bank Reconciliation Statement – arranging items in Trail Balance and getting tallied – Preparing final account – Trading, profit and loss account and balance sheet .

## **Unit III**

**Areas of Trade and Industry:** Major divisions of Commerce – Trade, Transport, warehouse, Bank, Insurance and advertisement – Trade – wholesale and retail – middleman and market functions, departmental and multiple shops – co-operative – consumer shops – fair price shops – hire purchase and installment system. Transport and warehouse – Road, rail, air and water transport – railway receipt – way bill – container service – classification warehousing – warehouse documents. Banking and insurance – banking services – major activities of commercial banks. Co-operative banks – lending schemes of nationalized banks – RBI – Travelers Cheque

## **Unit IV**

**Methods of Teaching:** Individualized instruction methods – supervised study – use of programmed learning – linear and branching programmes – case studies – their applicability to the teaching of commerce and accountancy. Computer Aided Instruction (CAI) – Role of teachers in individualized instruction.

## **Unit V**

**Evaluation of Commerce and Accountancy Teachers:** Teacher effectiveness – classroom climate – Teacher dominated pattern – democratic pattern – lassie-faire pattern – significance of the classroom climate – Evaluation of teachers – by pupils, self-evaluation, rating by superiors and colleagues, Flanders Interaction Analysis Category system.

### **Text Books:**

1. Aggarwal.J.C,2007, Teaching of commerce, Vikas publishing house Pvt Ltd, New Delhi,
2. Commerce and Accountancy Higher secondary Text Book,2005, Tamil Nadu Text Book Corporation, Chennai..

### **Reference Books:**

1. Robyler, M.D., Integrating Educational Technology into Teaching, Pearson Prentice Hall, New York, 2008.
2. Khan.M.S, The teaching of commerce, Sterling Publishers, New Delhi, 2005.
3. Singh, R.P, Teaching of commerce, Surya publications, Meerut.2007.

## **11ED221 OPTIONAL I: METHODOLOGY OF TEACHING ENGLISH II**



**Credits: 3:0:0**

**Objectives:**

To enable the student teacher to understand:

- the knowledge of different uses of language.
- to develop understanding of the remedial measures and analysis of errors
- to acquire knowledge of the Traditional Resources used for instruction in English Education

**Outcomes:**

At the end of the course the student develops skills in creative writing.

**Unit I**

**Creative Writing in English:** Collection of newspaper reports on events and functions, preparation of a report for newspapers, writing for journals – seminar, symposium and panel discussion.

**Unit II**

**Composition:** Letters – formal, Informal. Situational composition – Précis writing – Comprehension – Translation – Free composition – Paragraph writing – essay writing, paraphrasing.

**Unit III**

**Remedial English:** Remedial English – Identification of students’ difficulties in learning English and providing suitable remedial measures – diagnosis of students’ difficulties in learning English – Error analysis.

**Unit IV**

**The English Readers:** Types – Intensive, Extensive, and Supplementary. Criteria for selection of Reader – Aims and Purposes –Reviews of textbooks prescribed for Secondary and Higher Secondary classes.

**Unit V**

**Traditional Resources:** A survey of traditional resources used for instruction in English education (Models, Language Games, Music, Drama, Literature, Periodicals and Role Play)

**Text Books:**

1. Krishna Mohan, Meera Baneji, “Developing Communication Skills”, Macmillan India Ltd, 2007.
2. English Language Education, Source Book for the Diploma in Teacher Education.

**Reference Books:**

1. Dr. Geeta Rai, “Teaching of English”, Vinay Rakheja, 2007.
2. Dr. N.L.N. Jayanthi, “Teaching of English” Mrs. Kamala Prasad, Annamalainagar, Tamilnadu, 2008.

**11ED222 OPTIONAL II: METHODOLOGY OF TEACHING ENGLISH II**

**Credits: 3:0:0**

**Objectives:**

To enable the student teacher to understand:

- to be familiar with the English sounds
- to improve the spoken ability in English
- to develop the skill of reading and writing ability
- to familiarize with the technology of languages teaching.
- to familiarize with the Principles of curriculum construction.

**Outcomes:**

At the end of the course the student develops the four basic skills in English.

**Unit I**

**Spoken English – Phonetics:** Language and Linguistics - Different organs of speech and their functions –Classification of 44 English sounds-Difference between voice and voiceless sounds. Oral practice in new language items – Types of drills: Repetition drills – Substitution drills – Matching tables.

**Unit II**

**Technology for Language Teaching:** Teacher made aids – Flash cards, charts, models, Blackboard sketches. Mechanical Aids – overhead projector, Tape recorder, Radio, Television. Programmed Learning – Language Laboratory – power point presentation.

**Unit III**

**Listening and Speaking:** Listening Skills – Different kinds of listening materials – listening activity – Three phases of a listening class – listening for perception – listening for comprehension – uses of listening aids. Speaking Skills -Communicative competence – Importance of spoken English – methods to teach spoken English.

**Unit IV**

**Reading and Writing:** Methods of teaching reading to beginners – Reading comprehension – Silent Reading – Loud Reading – Skimming – Scanning. Writing skills – Mechanical skills – Grammatical skills – Discourse skills, coherence, cohesion- characteristic of good paragraph and essay.

**Unit V**

**Curriculum of English:** Curriculum, Syllabus and Text books- Principles of curriculum construction and modern trends need for curricula to meet individual differences - special curricula for the gifted and slow learners. Syllabus – Different types (structural, skill-based, situational, functional and notional). Criteria of books, journals etc. – School libraries - reading and community resources.

**Text Books:**

1. M.S. Bhatnagar, “Phonetics and Grammar”, alfa Publications, New Delhi, 2007.

2. Dr. Kalyan Pandey, "Fundamentals of English Linguistics and Phonetics", Indian Publishers Distributors Delhi, 2000.

**Reference Books:**

1. Dr. Geeta Rai, "Teaching of English", Vinay Rakheja, 2007.
2. Krishna Mohan, Meera Baneji, "Developing Communication Skills", Macmillan India Ltd, 2007.

**11ED223 EDUCATIONAL GUIDANCE AND COUNSELING****Credits: 3:0:0****Objectives:**

To enable the student teacher to understand:

- the meaning, nature and need of Guidance and Counseling services in schools.
- the Guidance services, qualities of the counselor and his functional competencies.
- the professional preparation of a counselor.

**Outcomes:**

At the end of the course, the student will be recognize the meaning, nature and need of guidance services and counseling in school, describe the different evaluative techniques to collect information about the individuals for effective guidance and interpret the values of modern trends in guidance movement.

**Unit I**

**Guidance and Counseling: Conceptual Aspects:** Aim of guidance and counseling– Nature, need and functions of guidance and counseling – Modern trends in guidance and counseling.

**Unit II**

**Guidance Strategies and Counseling Techniques:** Meaning of counselor – Conditions essential for counseling – Types of counseling – client-centered, Directive, Group guidance and group counseling, case conference procedures, multiple counseling.

**Unit III**

**Evaluation of Individuals for Effective Guidance:** The concept of Evaluation – Informal study approaches – Observation, Anecdotal records, Autobiographical Sketches, Sociogram and teacher-pupil interviews – Measurement of general and special abilities – Intelligence, Differential aptitude and achievement test – Measurement of personality traits, Projective technique and situational tests – The school testing programme – Individual testing, group testing, construction of case history

**Unit IV**

**Counselling Process and Services:** Counseling: Preparation, process and interactions – Counseling interview – Interview technique in counseling – Counselor & Counseee relationship – Pre-admission service- Admission service, Orientation service, student information service and Placement service.

**Unit V**

**Status of Guidance Movement in India:** Counseling Movement in modern times – Guidance Movement after Independence – Role of Government of India and Universities – Present Status of Counseling.

**Text Books:**

1. Kochhar, S.K, Guidance and counseling in Colleges and Universities, Sterling Publisher, New Delhi, 2005.
2. Shrivastava, K.K, Principles of Guidance and Counseling 2<sup>nd</sup> Ed., Kanishka Publishers. New Delhi, 2004.

**Reference Books:**

1. Yogesh Kumar Singh, Guidance and career counseling, APH Publishers, New Delhi, 2005.
2. Nayak & Rao, Guidance and career counseling, APH Publishers, New Delhi, 2007.
3. Abha sharma, Guidance and Counseling, Vista International Publishing House, New Delhi, 2006.

**11ED224 EDUCATIONAL MANAGEMENT**

**Credits 3:0:0**

**Objectives:**

To enable the student teacher to understand:

- The knowledge of the terms and concepts needs in Educational Management.
- the principles, functions and organization of Educational management.
- the knowledge in analyzing the roles and supervision method of the present heads of the educational institutions
- to develop interest in supervision and effective control of educational institutions

**Outcomes:**

At the end of the course the student develops skill in preparing document for effective educational administration and develops a desirable positive attitude towards the implementation of educational management.

**Unit I**

Educational Management – Administration - Meaning, definitions and difference - Functions of management . Theories of management -Principles of good management - Developmental management and maintenance management.

**Unit II**

Management –Leadership –Styles-Role of Head of the Educational institution in management - Educational Supervision –Meaning –Need-Types aims-Difference between Supervision and inspection-Methods of Supervision.

**Unit III**

Roles of Teachers, PTA, Alumni association inspectors of Schools - DEOs and CEOs on Educational Management - Role of State and Central Government, UGC, NCERT, SCERT ,NUEPA on Educational Administration - NUEPA.

#### **Unit IV**

Management of Curricular and Co-Curricular activities - Community partnership – Educational planning – Management of educational finance. School Time Table – School Records and Registers.

#### **Unit V**

Issues in Educational Management – centralization and decentralization autonomy and responsibilities - academic freedom - students participation in administration - self financing and aided institutions – Total Quality Management (TQM)

#### **Text Books:**

1. Jagannath Mohanty, Educational Management Supervision school organization, Neelkamal Publications PVT. Ltd Hyderabad, 2007.
2. Dr. R. A. Sharma, School Management, Surya Publications, Meerut, 2006.

#### **Reference Books:**

1. Dr. S.S. Bhatnagar, Dr. P, K. Gupta, Educational Management, Surya publications, Meerut, 2006.
2. Dr. R.P. Bhatnagar, Dr. Vidya Aggarwal, Educational Administration, Supervision, Planning and Financing, Surya publications, Meerut, 2006.

### **11ED225 EDUCATIONAL MEASUREMENT AND EVALUATION**

**Credits: 3:0:0**

#### **Objectives:**

To enable the student teacher to understand:

- the knowledge of the concepts and terms used in educational evaluation.
- the types and procedure of educational evaluation.
- the knowledge in construction and measurement of education outcomes.
- to develop skill in the construction of test and interpretation of test scores.

#### **Outcomes:**

On completion of this course the student - teachers will, know the different types of evaluation apply different procedure of educational evaluation, construct tests, and interpret the test scores.

#### **Unit I**

Measurement - Evaluation – Meaning - Definition Difference - Function of evaluation – Types of evaluation – formative, summative, criterion, referenced – Norm referenced.

#### **Unit II**

Objectives – Learning experiences and Evaluation: Meaning and relationship – Bloom's taxonomy of educational objectives.

#### **Unit III**

Testing procedure – Oral, written, performance – Measuring instruments - test, observation schedule, rating scales, check lists, cumulative records, anecdotal records, projective techniques – Achievement tests, aptitude test, attitude test, diagnostic test, prognostic test and their purposes.

#### **Unit IV**

Achievement test – Meaning – Types of test terms -objective type, short answer type and essay type – Characteristics of test – Objectivity, reliability and validity – Test construction procedures –Standardization.

#### **Unit V**

Interpretation of test results - Organization of data – Frequency distribution – Calculation of averages, mean, median and mode – standard deviation –Normal distribution – skewness, kurtosis –Graphical representation of data -Co-efficient of correlation.

#### **Text Books:**

1. J.C. Aggarwal, “Essentials of Examination System”, Vikas Publishing House Pvt. Ltd., New Delhi, 2007.
2. Best John W, ” Research in Education”, Prentice Hall of India, New Delhi, 2007.

#### **Reference Books:**

1. Bhatia K.K, “Measurement and Evaluation in Education”, Prakash brothers, Jalundur, 2007.
2. Bean K.L, Construction of Educational and personal Tests, McGraw Hill Company, New York, 2005.

### **11ED226 ENVIRONMENTAL EDUCATION**

**Credits: 3:0:0**

#### **Objectives:**

To enable the student teacher to understand:

- the need of environmental education
- natural resources and its conservation
- different kinds of environmental pollution and problems.
- various social issues related with environment
- management of environment

#### **Outcomes:**

On completion of this course the student will be able to analyze the need of environmental education, natural resources and its conservation, environmental pollution, social issues, management of environment and a sense of responsibility to live in harmony with nature.

#### **Unit I**

**Environmental Education:** Environmental Education - definitions, objectives, need and significance, guiding principles of EE, Environmental awareness- methods to propagate environmental awareness, Public Environmental Awareness methods, Role of NGOs.

## Unit II

**Natural Resources & Their Conservation** : Forest Resources, Water Resources, Mineral Resources, Energy Resources, Land/Soil Resources, Role of an individual in conservation of natural resources

## Unit III

**Environmental Pollution**: Types of environmental pollution: air pollution, water pollution, land pollution, noise pollution, radioactive pollution. Causes and Effects of pollution.

## Unit IV

**Social Issues and the Environment**: Green house effect, Ozone layer depletion, Global warming, Acid rain, Nuclear accidents & holocaust, Sustainable Development, Green Bench, Public Environment awareness, Teacher's role in promoting the Environmental awareness.

## Unit V

**Environmental Management**: Meaning, need, approaches to environmental management, components, functions, dimensions, International agencies & projects, national agencies & programmes of environmental management.

### Text Books:

1. Sharma, R.A., Environmental Education, R.Lall Book Depot, Meerut. 2007.
2. Shrivastava K.K., Environmental Education- Principles, Concepts & Management, Kaniska Publishers, distributors, New Delhi. 2006.

### Reference Books:

1. Kumarasamy, K., Alagappa Moses, A and Vasanthi, M., Environmental Studies, publication division, Bharathidasan University, Trichy, 2004.
2. Anil Kumar and Arnab Kumar, Environmental Education; New Age International Pvt. Ltd., Publishers, New Delhi, 2004.

## 11ED227 OPTIONAL I TEACHING COMPETENCY (Practical)

**Credits: 0:0:3**

### Objectives:

The student teachers are enabled to:

- put into practice the skills that they have learnt.
- prepare and use teaching aids in the appropriate place and time.

### Outcomes:

On completion of their Teaching Practice for 30 days in the schools, the students would have practiced the skills of teaching effectively to perform better as a teacher.

**School Teaching Practice for 30 working days in their optional I at various Schools.**

1. Observation Classes – 10



2. Lesson Plans - 20
3. Preparation and Use of Instructional Aids

### **11ED228 OPTIONAL II TEACHING COMPETENCY (Practical)**

**Credits: 0:0:3**

**Objectives:**

The student teachers are enabled to:

- put into practice the skills that they have learnt.
- prepare and use teaching aids in the appropriate place and time.

**Outcomes:**

On completion of their Teaching Practice for 30 days in the schools, the students would have practiced the skills of teaching effectively to perform better as a teacher.

#### **School Teaching Practice for 30 working days in their optional II at various Schools**

1. Observation Classes – 10
2. Lesson Plans - 20
3. Preparation and Use of Instructional Aids

### **11ED229 OPTIONAL I MICRO TEACHING (Record)**

**Credit: 0:0:1**

**Objectives:**

The student teacher is enabled to:

- practice each teaching skill effectively.
- make use of teaching aids appropriately.

**Outcomes:**

The students acquire the various skills of teaching.

The B.Ed. trainees should practice any six of the following teaching skills:

1. Skill of introduction
2. Questioning skills (all skills related to asking question)
3. Using Blackboard
4. Skill of Reinforcement
5. Skill of Explanation
6. Skill of Stimulus Variation
7. Skill of Closure

The trainees should record the remarks of the observers.

## 11ED230 OPTIONAL II MICRO TEACHING (Record)

**Credit: 0:0:1**

### **Objectives:**

The student teachers are enabled to:

- practice each teaching skill effectively.
- make use of teaching aids appropriately.

### **Outcomes:**

The students acquired the various skills of teaching.

The B.Ed. trainees should practice any six of the teaching skills:

1. Skill of introduction
2. Questioning skills (all skills related to asking question)
3. Using Blackboard
4. Skill of Reinforcement
5. Skill of Explanation
6. Skill of Stimulus Variation
7. Skill of Closure

The trainees should record the remarks of the observers.

## 11ED231 CONSTRUCTION OF TESTS (Record)

**Credit: 0:0:1**

### **Objectives:**

To enable the student teacher to understand to conduct diagnostic test and achievement test in both the optional subjects and submit the record.

### **Outcomes:**

At the end of the course, the student will be able to administer diagnostic test and achievement test.

1. Evaluation
  - ❖ Meaning, Definition and Types
  - ❖ Test and Measurement
  - ❖ Types of Test
  - ❖ Characteristics of Test
2. Diagnostic Test

- ❖ Preparation
- ❖ Administration
- ❖ Error Analysis
- ❖ Interpretation
- ❖ Remedial Teaching

### 3. Achievement Test

- ❖ Weightage of Objectives, Content and Questions
- ❖ Blue Print
- ❖ Question Paper
- ❖ Scoring Procedure
- ❖ Key
- ❖ Standardization of test

### 4. Application of Statistics

- ❖ Measures of Central Tendency Mean, Median, Mode
- ❖ Measures of Dispersion – Standard Deviation, Quartile Deviation
- ❖ Rank Correlation

### 5. Graphical Representation

- ❖ Frequency Curve
- ❖ Frequency Polygon
- ❖ Histogram
- ❖ Ogive Curve

## **11ED232 PSYCHOLOGY PRACTICAL (Record)**

**Credit: 0:0:1**

**Objectives:**

To enable the student teacher to understand to carry out the practicals.

**Outcomes:**

- At the end of the course, the student will be able to conduct the practicals in their practicing schools.

The B.Ed. Trainees should carry out any six practicals from the following and submit a record.

1. Motor dexterity
2. Finger dexterity
3. Attitude Tests
4. Mirror drawing
5. Pass along test
6. Personality tests
7. Raven's non-verbal Intelligence

8. Aptitude Tests
9. Personality
10. Emotional Intelligence Scales
11. Creativity Test
12. Problem solving
13. Level of Aspiration
14. Adjustment inventory

### **11ED233 CASE STUDY AND ACTION RESEARCH (Record)**

**Credit: 0:0:1**

#### **Objectives:**

To enable the student teacher to understand:

- to acquire the knowledge of research
- the process of case study and action research
- to apply the case study and action research to the improvement of students and school

#### **Outcomes:**

Each student teacher will learn to do an action research on any of the problem of the teaching practice school

Each student teacher will learn to do a case study on any one pupil selected from his / her class of the teaching practice school.

#### **Action Research:**

Each student teacher should conduct an action research on any of the problem of the teaching practice school and submit the record of the same in the prescribed form.

Meaning – Characteristics and process of action research – selecting problems for action research–steps in action research:

- a. Title
- b. Need for the study
- c. Statement of the problem
- d. Defining the terms
- e. Action Hypothesis
- f. Design : selection of the sample-pre-test, post test
- g. Analysis of data
- h. Result and conclusions

#### **Case study**

#### **Meaning-:**

Types of case studies- characteristics-importance and Limitations of case study

#### **Performa for case study:**

- a. Identification of the case
- b. Statement of the problem

- c. Home condition
- d. Physical statistics and medical history
- e. Development data
- f. Interest and special aptitude
- g. Educational record and history
- h. Personality dispositions
- i. Causes for his deviant behaviour
- j. Remedial work and suggestions

### **11ED234 SCHOOL SURVEY (Record)**

**Credit: 0:0:1**

**Objectives:**

To enable the student teacher to understand about different schools their teaching methods, teaching techniques etc.

**Outcomes:**

This visit helps the student to differentiate schools in regard with teaching methods, facilities available level of students and the mission of each school.

Each student teacher should visit one State Board School, one International School, one Special School. Also trainees should follow the following steps for the record.

- a. Introduction about the school
- b. Infrastructural facilities
- c. Instructional facilities
- d. Human resources
- e. Organizational chart
- f. Services to the society by the school
- g. Conclusion

### **11ED235 PHYSICAL EDUCATION AND HEALTH EDUCATION (Record)**

**Credit: 0:0:1**

**Objectives:**

To enable the student teacher to understand:

- to acquire the knowledge of Physical education
- to apply the knowledge of first aids in real life situation
- to conduct Physical Education classes for the school students

**Outcomes:**

On completion of this course the students will be able to handle physical education classes for school students.

### **Unit I**

Physical Education – Aims & Objectives - Need for Physical Education - Conduction School Assembly (including flag hosting) - Qualities of Sportsman

### **Unit II**

Major and Minor Games – Mass drills – Intramural competition – Fixtures – organization and conduct – Health and Safety Education – Modern Trends in Sports

### **Unit III**

Health and wellness – Food and Nutrition – Diet, Vitamins – Deficiency diseases – First aid for sports injuries and other common first aid treatments – Basic rules of all games.

Practicum:

- ❖ Each student should prepare physical education lesson plans (5 General lesson plans and 5 particular lesson plans)
- ❖ Each student should submit a drawing note which includes courts of basket ball, volley ball, foot ball, hockey field and Track & field with markings. Track – All the required markings. Field events: - Any two throws and any two Jumps.
- ❖ Each student should submit a picture album containing pictures connected with physical and health education.

## **11ED236 COMMUNITY SERVICE**

**Credit: 0:0:1**

### **Objectives:**

To enable the student teacher to understand to organize community service

### **Outcomes:**

Each student teacher will learn to organize community service

- ❖ Any society related community service should be conducted at near by village. Also they should record the activities.
  - a. Planning
  - b. Organizing
  - a. Financing
  - b. Executing (Activities)
  - c. Evaluating
  - d. Educational values

## **11ED237 EDUCATIONAL TECHNOLOGY LAB (Record)**

**Credit: 0:0:1**

**Objectives:**

To enable the student teacher to understand:

- Bloom's taxonomy of writing instructional objectives
- the process of developing teaching aids
- the process of developing computer based teaching aids
- the process of evaluating the website

**Outcomes:**

On completion of this course the student - teachers will write instructional objectives, develop teaching aids, develop computer based teaching aids, evaluate the website.

The B.Ed. trainees should carry out any six practical works from the followings and submit a Record note:

1. Theoretical outline of Educational Technology (Bloom's taxonomy of educational objectives)
2. Preparation of Information Technology Album
3. Create CAI by using MS Power Point in CD on the optional subjects
4. Prepare one Audio/Video lesson on subject concern
5. Prepare 20 number of slides on the subject concern
6. Identify a website and make a critical analysis in terms of content, design and technical features and make a note of it.
7. Operation of Digital moving camera and make a note about the parts and functions of it.
8. Develop a Computer Assisted Learning (CAL)
9. Developing Charts & film strips
10. Technological improvisation in models of teaching. (make a note about the applications of technology in Education)

**11ED301 METHODOLOGY OF EDUCATIONAL RESEARCH AND STATISTICS****Credits: 4:0:0****Objectives:**

To enable the student teacher to understand:

- to acquaint the student with the methods used for locating problem areas and research problems.
- to familiarize the students with the common tools of research and assess their efficiency.
- to help the student use statistical techniques and designs in educational research.
- to familiarize the student with the standard conventions used in presenting the research report.

**Outcomes:**

On completion of this course the student - teachers will recognize the different areas of educational research know the process of research, utilize the different methods,

techniques and tools of the research, analyze the data and interpret the results, develop research report.

### **Unit I**

**Introduction to Educational Research:** Educational Research: Meaning, Need and Scope – Areas of Educational Research – Classification of Research: Fundamental research, Applied research and Action research – Qualities of a good researcher – Stages in Research Process

### **Unit II**

**Research Problem & Hypothesis:** Selection of research problem – Source and Criteria – Statement of the problem – Survey of related literature and its importance – Hypothesis: Meaning, Characteristics, Types, Formulation and Testing-TypeI/TypeII error.

### **Unit III**

**Research Design & Sampling:** Methods of Research: Survey – Historical – Experimental – Ethnographic – Case Study – Correlational studies – Cross Sectional Method – Sampling: concept of population and sample – Characteristics of a good sample – Sampling techniques – Sampling errors and ways to reduce them.

### **Unit IV**

**Research Tools & Techniques:** Tools and Techniques – Characteristics of a good research tool - types of research tools and techniques and their uses – questionnaire - interviews – observations – tests and scales- projective and socio-metric techniques - rating scales – inventories - Writing of Research Proposal and Research Report.

### **Unit V**

**Statistical Tools for Data Analysis:** Descriptive Statistics – Measures of Central tendency and variability – Graphical representations of data – Normal Distribution: Characteristics and application – Parametric & non-parametric tests - Co-efficient of correlation: Pearson product moment, rank difference – Regression and prediction – Chi-square – Test of Significance: t-test and f-test – SPSS and its applications.

### **Text Books:**

1. John W. Best & James V. Kahn, Research in Education (9<sup>th</sup> ed.). New Delhi: Prentice Hall of India Pvt. Ltd, 2005.
2. Dr. Radha Mohan, “Research Methods in Education”, Neelkamal Publications Pvt. Ltd., New Delhi, 2006.

### **Reference Books:**

1. Bhawana Mishra, “General Methods of Educational Research” Sumit Enterprises, New Delhi, 2003.
2. Sharma, R.A., “Parametric & Non-parametric Statistics in Education and Psychology. R. Lall Book Depot, Meerut, 2006.
3. Sharma R.A., “Essentials of Scientific Behavioral Research”, R. Lall Book Depot, Meerut, 2007.

## **11ED302 ADVANCED EDUCATIONAL TECHNOLOGY**



**Credits: 4:0:0**

**Objectives:**

To enable the student teacher to understand:

- the applications of advance technology in education.
- to explore the potentials of advanced computer based technologies in teaching and learning process.
- the concept and applications of online teaching method and designing principles.

**Outcomes:**

On completion of this course the student - teachers will know the different types of educational technology, analyze different teaching models, develop CBI courseware, develop WBI and designs, know online teaching and learning.

**Unit I**

**Educational Technology: A Conceptual Framework :** Educational Technology: definition, meaning, scope – Types of Educational Technology: Teaching Technology, Instructional Technology and Behavioural Technology – Approaches of Instructional designs: Training Psychology, Cybernetic Psychology, System Analysis and System Approaches – Role of Teacher in Educational Technology

**Unit II**

**Models and Strategies of Teaching:** Models of Teaching: Meaning – Fundamental Elements – Role of Model – Types of Teaching Models: Historical Teaching Model, Philosophical Models of Teaching, Psychological Models of Teaching, Teaching models for Teacher Education and Modern Models of Teaching – Higher order Strategies of Teaching: Conference, Seminar, Symposium, Workshop and Panel Discussion

**Unit III**

**Computer Based Instruction: A Conceptual Framework:** Historical background of Computers – Uses of computers: teaching, learning, evaluation, administration and research – CBI -Methods of CBI: Tutorials, Drill and Practice, Simulations and Instructional Games – Development of CBI materials: steps, planning and phases – Computerized test construction and administration.

**Unit IV**

**Web Based Instruction & Designing:** Meaning, scope and significance of WBI – guidelines and principles of web based instructional design – Computer mediated communication: internet, e-mail, voice mail and chat – History of internet – Models of WBI: Instructional System Design (ISD) and Hyper Media Design (HMD) model – Computer languages for designing WBI – Merits and demerits of WBI.

**Unit V**

**Online Teaching Method and Designing:** Online teaching: meaning, scope and relevance – Fundamentals of online communication – Role of instructor and learner in online teaching – Designing instruction for online environment: instructional design, online course development – Communication and Collaboration – Assessment of online learning – Merits and demerits of online teaching.

**Text Books:**

1. R.A.Sharma, "Technological Foundation of Education", R. Lall Book Depot, Meerut, 2005.
2. P.P.Singh,"E-Learning", Deep & Deep Publications Pvt. Ltd., New Delhi, 2005.

**Reference Books:**

1. Fredrick G.Knirk (2006), Instructional Technology, Saunders Coolege Publishing, Sydney
2. JC Aggarwal (2007), Essentials of Educational Technology, Vikas Publishing House Pvt. Ltd., New Delhi.
3. U. K. Singh (2007) Computer Education, Discovery Publishing House, Delhi.
4. Dr. Satyawati Rawool (2008), Software Development, Indira Gandhi National Operrn University, Noida.

**11ED303 SPECIAL EDUCATION****Credits: 4:0:0****Objectives:**

To enable the student teacher to understand:

- the concepts, objectives and methods of special education.
- various aspects of growth and development of handicapped children.
- educational programmes for gifted and creative children, disabled children and juvenile delinquents.

**Outcomes:**

At the end of this course, the students will have knowledge of special education, various methods and techniques of teaching special children and identifies the special needs of the children

**Unit I**

**Concept of Special Education:** Concept and nature of special education – objectives – types – Principles- integrated education. Special education – Importance of mother and family – Impact of exceptional children on the family – attitudes of society – family and school – Organization of special schools – special schools and integrated approach – Principles of organizing special classes – mainstreaming and normalization – Integrated education – nature and scope.:

**Unit II**

**Mentally and Physically Challenged Children:** Education of Mentally Retarded, Education of the Visually Impaired, Education of the Hearing Impaired, and Education of the Orthopedic impaired children - characteristics – etiology, identification, problems and educational provisions

**Unit III**

**Gifted and Creative Children:** Education of the Gifted and Creative Children – characteristics, identification and problems of gifted and creative children- – educational provisions. Methods of teaching creative children

#### **Unit IV**

**Learning Disabled Children:** Learning Disabled Children – characteristics – etiology and identification, Types of learning disability – educational provisions – Teaching methods and techniques for learning disabled children

#### **Unit V**

**Juvenile Delinquents:** Education of Juvenile Delinquents – characteristics – problems of alcoholism, drug addiction – anti-social and character disorder – educational provisions for Rehabilitation.

#### **Text Books:**

1. R. A. Sharma, Fundamentals of Special Education, Surya Publications, Meerut, 2006.
2. Bharat Singh, Modern Special Education, Anmol Publications PVT.LTD, New Delhi, 2006.

#### **Reference Books:**

1. Kavita Jain, Special education, Mohit Publications, New Delhi, 2005.
2. Venkataiah, Special Education, Anmol Publications PVT.LTD, New Delhi, 2006.
3. Digumarti Bhasakara Rao, Jampala Madhu Bala, Methods of Teaching Exceptional Children, Discovery Publishing house. New Delhi, 2006.

### **11ED304 EDUCATIONAL PLANNING AND ADMINISTRATION**

**Credits: 4:0:0**

#### **Objectives:**

To enable the student teacher to understand:

- the basic concepts of educational administration and planning.
- to familiarize the basic concepts, principles and process of Educational administration and planning.
- to develop an understanding and appreciation of the role of the different agencies in educational planning and administration.
- the broad problems in the field of educational administration and planning.

#### **Outcomes:**

At the end of the course the student will develop a concept of competency in educational administration.

#### **Unit I**

Meaning and scope of Educational Administration – Development of modern concept of Educational Administration - Administration as a process – Administration as a bureaucracy - Human Relations Approach to Administration.

#### **Unit II**

Meeting the Psychological needs of employees, systems approach specific trends in Educational Administration such as (a) Decision making (b) Organisational Compliance (c) Organisational Development (d) PERT (e) Modern trends in Educational Management.

### **Unit III**

Leadership in Educational Administration: Meaning and Nature of Leadership, Theories of Leadership-philosophical approach, trait theory, behavior theories, contingency theories-Fiedler's theory, vroom's & Yetton's theory, Reddin's 3D theory, Hersey's & Blanchard's theory, path- goal theory, Styles of Leadership, Measurements of Leadership.

### **Unit IV**

Educational Planning: Meaning, Nature, purpose, importance, principles, Approaches to Educational Planning, Perspective Planning, Institutional Planning- aims, objectives, requirements, areas of IP, role of various agencies in IP.

### **Unit V**

Educational Supervision: Meaning and Nature - Supervision as service activity - Supervision as a process - Supervision as functions, , Supervision as educational leadership, Functions of supervision, Planning the supervisory programme, Organizing supervisory programme, Implementing supervisory programme.

#### **Text Books:**

1. S.S. Chandra, A. K. Chakarborty, 'School Administration, Organisation and Management. Vikas Pvt. New Delhi, 2006.
2. Dr. S.S. Bhatnagar, Educational Management, Neelkamal Publications, New Delhi, 2006.

#### **Reference Books:**

1. Jagannath Mohanty, Educational Management, Neelkamal Publications Pvt Ltd, Hyderabad, 2007.
2. Dr. R.A. Sharma, Education Planning and Administration, Surya Publications, Meerut, 2006.

## **11ED305 INSTITUTIONAL MANAGEMENT**

**Credits: 2:0:0**

#### **Objectives:**

To enable the student teacher to understand:

- quality management of Education
- performance indicators, Benchmarking, TQM
- human Resource Management
- finance management
- disaster management

#### **Outcomes:**

On completion of this course the student will be able to analyze the Quality management of Education, Performance indicators, Benchmarking, TQM, Human Resource Management Finance management and Disaster management.

### **Unit I**

**Quality in Education:** Quality concept, Quality related terminologies - Quality control, Quality Assessment, Quality Audit, Quality Assurance, and Quality Management. Reasons for maintaining Quality, Need and importance of Quality in Higher Education.

### **Unit II**

**Performance Indicators, Benchmarking, TQM:** JTypes of Performance Indicators, use of Performance Indicators, Performance Indicators for Indian Institutions, Performance Indicators of NAAC. Benchmarking – Types – benefits, Methodologies of benchmarking Process. TQM, Elements, TQM Plans, Approach to TQM, TQM Process.

### **Unit III**

**Human Resource Management :** HRM – definition, meaning, features, objectives, concepts – produce / product, factor concept, productivity concept, reputation concept, resource concept, relationship concept , human relations concept, citizenship concept - joint functions.

### **Unit IV**

**Finance Management :** Essence of Finance Management, Importance of Finance Management, significance of Finance Management, Functions of Finance Management- Matrix of Finance function, Investment and Asset management function, Liability Management function , Excess Earning distribution function, Goals of Finance management in Education.

### **Unit V**

**Disaster Management :** Terminologies in disaster – Hazard, Disaster, Vulnerability, Risk. Kinds of disasters- Natural, Man made. Need for Disaster Management, School Safety and education for disaster reduction, role of stakeholders in Disaster Management.

### **Text Books:**

1. Dr. S.S. Bhatnagar, Dr. P.K.Gupta Educational Management. Surya Publication, Near Govt Inter College, Meerut, 2006.
2. Dr. R.P. Bhatnagar, Dr. Vidya Aggarwal Educational Administration Supervision, Planning & Financing. Vinay Rakheja, C/o R. Lall Book Depot, Near Inter College, Meerut, 2007.

### **Reference Books:**

1. Dr. R.A Sharma, Educational Administration and Management. Surya Publication, Near Govt Inter College, Meerut, 2006.
2. Jagannath Mohanty, Educational Administration Supervision and School Management, Deep & Deep Publications(P) Ltd, F- 159, Rajouri Garden, New Delhi, 2005.

## **11ED306 TEACHING PEDAGOGY**

**Credits: 2:0:0**

### **Objectives:**

To enable the student teacher to understand:

- the knowledge of teaching and learning
- the factors affecting teaching and learning
- to apply the technology in teaching and learning
- the evaluation of teaching and learning

**Outcomes:**

At the end of the course the student will learn the concept of teaching and learning and will apply technology in his/her teaching and learning process.

**Unit I**

**Introduction to Teaching:** Meaning, Definition, Principles and Types of Teaching – Objectives of Teaching – Teaching Methods – Teaching Styles: Role of Teacher – Qualities of teacher – Role of curriculum in teaching.

**Unit II**

**Introduction to Learning:** Meaning, Definition, Principles and Types of Learning – Characteristics of Learner – Types of Learner – Role of theories of Learning – Domain based learning: Cognitive, affective and psychomotor– Role of Motivation in learning.

**Unit III**

**Technology in Teaching and Learning:** Introduction to Educational Technology – Instructional aids: Projected and Non-projected aids – Role of mass media in teaching and learning – Selection of media – Role of computers in teaching and learning

**Unit IV**

**Factors Affecting Teaching and Learning:** Sociological Factors: Society, family, school, peer group – Demographic factors: Age, sex, socio economic status – Psychological factors – Interests, personality, attitude, aptitude, intelligence and emotional factors

**Unit V**

**Evaluation of Teaching and Learning:** Meaning, Definition and scope of Evaluation – Types of Evaluation: Diagnostic, formative and summative – Difference between quantitative and qualitative evaluation – Role of test and measurement in evaluation.

**Text Books:**

1. Romesh Verma, Suresh Sharma, Teaching Technology, Anmol Publications Pvt., Ltd. New Delhi, 2004.
2. R. A. Sharma, Essentials of measurements, Vinay Rakheja, Meerut, 2007.

**Reference Books:**

1. S. K. Mangal, Essentials of Educational Psychology, Prentice Hall of India Private Limited, New Delhi, 2007.
2. Dr. R. A. Sharma, Managing Teaching Activities, Surya Publication, 2006.

**11ED307 CURRENT TRENDS IN HIGHER EDUCATION****Credits: 4:0:0****Objectives:**

To enable the student teacher to understand:

- the objectives, role and functioning of Higher Education System in India.

- the role of national and state level policies on Higher Education
- the role of NGOs and Indian Universities in Higher Education.
- quality maintenance in higher education
- distance and open learning systems in India.

#### **Outcomes:**

On completion of this course the student will be able to evaluate the Higher Education System in India, policies on Higher Education, role of NGOs and Indian Universities, quality maintenance, Distance and Open learning system in India.

#### **Unit I**

**Higher Education: An Overview:** Higher Education – Introduction, Objectives, Management of higher education, Training and Administration, Professional Education, Vocational Education, Innovative programmes, Special Education activities – Higher Education: National & International level – Policies on higher education with special reference to NPE 1986 – Educational Pattern in Higher Education – Reforms in Higher Education.

#### **Unit II:**

**Agencies of Higher Education:** Ministry of Human Resources and Development (MHRD): Objectives, Role, Planning and Funding – University Grants Commission (UGC): Objectives, Rights, Funding Procedures, Research Activities, Schemes – Role of Professional Councils: AICTE, ICAR, BCI, NCTE, NCERT and MCI. – Role of Higher Education Agencies in Research.

#### **Unit III**

**Role Of NGOS In Higher Education:** NGOs in Higher Education: Activities, Functioning and Funding – UNESCO: Mission and Vision, organization, structure, contribution towards higher education – Commonwealth of Learning (COL): Mission, activities and functions, governance, administrations, collaborative and other services – UNICEF: objectives, activities and contribution towards higher education – Role of Universities in higher education – World Health Organization (WHO): objectives, activities and contribution towards higher education.

#### **Unit IV**

**Quality Maintenance in Higher Education:** Evaluation, Assessment and Accreditation of Higher Education Institutions – National Assessment and Accreditation Council (NAAC): Vision, Mission, Functions, Assessment in terms of Infrastructural and Curricular aspects, Financial support, procedure for making application, action plan and assessment and accreditation for different states – SWOT analysis.

#### **Unit V**

**Distance & Open Learning System:** Distance Education in 21<sup>st</sup> Century – Challenges of Distance Education – Role of Indian Universities in Distance & Open learning – Role of IGNOU: Objectives, Functions, Features, Thrust areas in Higher Education – Role of Distance Education Council (DEC) – Role of Technologies in Distance & Open Learning: Electronic Media, e-learning, Internet, e-teaching and Virtual University Systems.

#### **Text Books:**

1. Ashok Kumar, Current Trends in Indian Education. Ashish Publishing House, New Delhi, 2004.
2. Sunil Behari Mohanty, Improving University and College Teaching, New Delhi: A.P.H. Publishing Corporation, New Delhi, 2004.

**Reference Books:**

1. Udai Veer, Modern Problems of Education, Anmol Publications Pvt. Ltd, New Delhi, 2004.
2. Digumarti Bhaskara Rao, World Education Forum, Discovery Publishing House, New Delhi, 2003.
3. Chhaya Shukla, Reforms in Higher Education, Sumit Enterprises, New Delhi, 2004.

**11ED308 METHODOLOGY OF RESEARCH AND STATISTICS**

**Credits: 4:0:0**

**Objectives:**

To enable the student teacher to understand:

- the meaning and methods of educational research
- the process and steps in research
- to formulate research design and tools for data collection
- to get knowledge of descriptive statistics and to analyze and interpret

**Outcomes:**

On completion of this course the student will be able to understand the meaning and methods of educational research, formulate research design, find out tools for data collection, use statistics and to analyze and interpret the data.

**Unit I**

Research - meaning, Characteristics of Research, Methods of Research – Descriptive, Developmental and intervention Research. Case study, Participatory and Ex post fact research, Qualitative studies - Basic, Applied and Action research. Educational Research – Nature and Types. Research in educational policy and reforms, Classroom research and innovative practices.

**Unit II**

Research process: Steps in Research, formulation of a problem for research – Review of Literature, Statement of problem, Delimitation, Definition of terms, Objectives, Hypothesis, Functions and role of hypothesis in research. Variables- meaning and types.

**Unit III**

Experimental Research, Principles and steps, Types of Experimental Designs. Techniques of experimental manipulation. Concept of control, Experimental errors.

Non Experimental Research – Survey Research – Purpose and Types Census and sample Surveys, Merits and demerits, Survey methods Application of survey, case study, Field study.

**Unit IV**



Research Design – Principles and components, Methods of Data collection, Sources of data, - primary and secondary sources – field operation logistics mapping and location of units.

Tools and techniques of data collection – Non – testing techniques and scaling techniques, Achievement and Criterion Tests, Data Collection in school context, Focus group and participatory methods, Establishing validity and reliability of research data.

Sampling, census vs. sampling. Characteristics of a good sample, sampling frame and sample size sampling methods: probability and non – probability samples, sampling and non – sampling errors.

### **Unit V**

Descriptive statistics – Measures of centrality, Dispersion, Skewness, Kurtosis, Correlation and Regression analysis. Parametric and non – parametric test t - test and chi – square test, Sign test, Run test, ANOVA, ANCOVA. Multivariate Analysis, Factor Analysis.

Analysis and interpretation of data: Data processing – categorization and coding. Analysis of data computer programs & packages, SPSS, drawing inferences and interpretation – Reporting research, guidelines in preparation of a research report, format of a research report. Use of reference, foot notes, bibliography – glossary - appendix.

### **Text Books:**

1. Best, J.W and Khan. Research in Education. New Delhi: Prentice Hall of India, 2003.
2. Kothari, C.R. Research Methodology Methods and Techniques. New Delhi: New Age International Publications Pvt Ltd, 2006.
3. Lokesh, Koul, Methodology of Educational Research, New Delhi: Vikas Publishing House, 2005.

### **Reference Books:**

1. R.A. Sharma, Essential of Scientific Behavioral Research, R.Lall Book Depot, Meerut, 2007.
2. M.N. Borse Research Methodology, Shree Niwas Publications, Jaipur, 2005.
3. R. Pannerselvam, Research Methodology, Prentice – Hall of India Pvt, New Delhi, 2007.

## **11ED309 CONTEMPORARY ISSUES IN EDUCATION AND EDUCATIONAL MANAGEMENT**

**Credits: 4:0:0**

### **Objectives:**

To enable the student teacher to understand:

- new quality perspectives in higher education & multiplicity of courses
- quality management in education
- autonomy and accountability
- finance management in education
- marketing of education services

### **Outcomes:**

On completion of this course the student will be able to analyze new quality perspectives in higher education, multiplicity of courses, quality management in education, autonomy and accountability, finance management in education, marketing of education services

## **Unit I**

**Multiplicity of Courses:** Traditional courses, Distance Learning, E-Learning, Fulltime courses, part time courses, own time courses, inter disciplinary courses, hybrid courses, interface courses, courses in global perspective, ecological courses, education and nature studies, conservation of natural resources and sustainable development and its management, performance indicators and bench marking in higher education. New quality perspectives in higher education

## **Unit II**

**Quality Management in Education:** Definition, Elements, Planning, Approaches, input process, output, academic audit, Accreditation, Total Quality Management (TQM). Quality in global perspective – global standards, SWOT Analysis, ISO 9000 certification

## **Unit III**

**Autonomy and Accountability:** Issues relating to Autonomy, Accountability and Accreditation of individual, departmental and institutional level. Impact of stake holders and the societal system -Campus tranquility management, extracurricular activities for institution and social bonding, extension services and outreach programmes for societal development activities

## **Unit IV**

**Finance Management in Education:** Essence of Finance Management – importance, functions, goals. Sources of education finance – Govt. grants – central, state, UGC grants, local bodies, donations, endowments, grant-in-aid, private capital, foreign sources – Expenditure management – patterns of education expenditure – salary and overheads, scholarships, fee concessions

## **Unit V**

**Marketing of Education Services:** Services marketing, product mix, price mix, people and communication mix, people in education service, bench marking, quality assurance in teaching, interrelation and globalization of education marketing. Intellectual property rights in education service.

### **Text Books:**

1. Dr. S.S. Bhatnagar, Dr. P.K.Gupta Educational Management. Surya Publication, Meerut, 2006.
2. Dr. R.P. Bhatanagar, Dr. Vidya Aggarwal Educational Administration Supervision, Planning & Financing, Lall Book Depot, Meerut, 2007.

### **Reference books:**

1. Dr. R.A Sharma, Educational Administration and Management. Surya Publication, Meerut, 2006.
2. Jagannath Mohanty, Educational Administration Supervision and School Management, Deep & Deep Publications (P) Ltd, New Delhi, 2005.

## **11ED310 EDUCATIONAL MEDIA AND INSTRUCTION**

**Credits: 4:0:0**

### **Objectives:**

To enable the student teacher to understand:

- the applications of Educational media and Communication..
- to explore the potentials of advanced educational technologies in teaching and learning process.
- the role of educational media for instructional design.
- to know the applications of computers in educational media production.

**Outcomes:**

At the end of the course the student will be able to apply modern technologies in education,

**Unit I**

**Introduction to Educational Media & Communication:** Meaning and Scope of Educational Media – Systems approach to Educational Media – Educational Media production – Communication: meaning, types and models – Technology in Communication – Educational Media and Educational Development – Information and Communication Technology – Role of Educational media in Educational Research.

**Unit II**

**Applications of Educational Technology:** Educational Technology: definition, meaning, scope and relevance to the present system of Education – Applications of Educational Technology for distance and open learning – Modern communication Technology – Systems approach: meaning, significance and process – Modern trends in Educational Technology: e-learning, e-teaching, Virtual learning, digital conferences, Learning Management Systems.

**Unit III**

**Role of Educational Media for Instructional Design:** Audio-Visual media in Education – Psychological factors for using Audio-Visual aids – Characteristics of audio-visual media – projected and non-projected aids – Preparation of Programmed instructional material – Role of Educational media for formal, non-formal and in-formal education – Role of Educational media for children with special needs.

**Unit IV**

**Educational Media and Its Programmes:** Educational Television – Satellites in open learning system – EDUSAT – Educational Websites – Internet – Online programmes – UGC's Countrywide Classroom programme – TV Documentaries – Quiz programmes – Kids programmes – News programmes – Commercial programmes.

**Unit V**

**Computers in Educational Media and Instruction:** Use of Computer Technology in Education – Computers in Classroom – Computer as a teaching & learning tool – Computer Based Instructions: CAI, CALL – Computers for evaluation – Computers in Research – Multimedia for effective instruction – Web Based Instruction: meaning, scope and application – Computerized test construction and evaluation.

**Text Books:**

1. Aggarwal J.C, Essentials of Educational Technology – Teaching Learning Innovations in Education – Vikas Publishing House Pvt. Ltd, 2005.

2. Sharma. R.A, Educational technology and Management –Models, Media and Methods, Vinay Rakheja publishers, Meerut, 2007.

**Reference Books:**

1. Kamat, David, Media education, Crescent publishing corporation, New Delhi, 2008.
2. Digumarti Harshitha & Digumarti Bhaskara Rao, Methods of teaching Information Technology, Discovery publishing house- new Delhi, 2004.
3. Verma. N.K, Mahaveer sons publishers, New Delhi, 2007.
4. Mujibul Hasan siddiqui, Technology in Higher Education, APH Publishing Corporation, New Delhi, 2005.

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