

B-201-A: PEDAGOGY OF MATHEMATICS

Objectives

The pupil teacher will be able:

1. To understand the language and symbolism of mathematics as a discipline.
2. To develop the pedagogic understanding of Mathematics in context of school and learner.
3. To understand and apply different methods of teaching mathematics in the classroom.
4. To promote understanding of Mathematics in learners.
5. To select and organize content, plan instruction and ensure effective delivery.
6. To organize pedagogic study of subjects in Mathematics at school level.
7. To facilitate philosophical & epistemological insights of Mathematics teaching in pupil teacher.
8. To enrich knowledge and teaching competency.

Course Content

UNIT I

- Nature, scope and importance of Mathematics, Brief history of Mathematics.
- Contribution of Mathematicians:
Indian: Aryabhata, Brahmagupta, Bhaskara-I, Bhaskara-II (Bhaskaracharya), Ramaujun.
Other than India: Pythagoras, Euclid, Gauss, Leonhard Euler, Alan Turing.
- Need and significance of teaching Mathematics, Aims and objectives of teaching Mathematics
- Concept formation (Theories and implications), Writing of objectives in Behavioral terms, Factors influencing learning of Mathematics

UNIT II

- Place of Mathematics in school curriculum.
- Selection, sequencing and organization of curriculum content.
- Correlation of Mathematics with other school subjects
- Critical appraisal of Mathematics curriculum and textbook at the Upper Primary, Secondary and senior secondary Level

UNIT III

- Methods of teaching Mathematics: Inductive, Deductive, Analytical, Synthetic, Heuristic, Project, Laboratory, Lecture and Question-answer.
- Techniques of teaching Mathematics: oral, written, drill, assignment, self study, supervised study, programmed learning, group work and review.
- Audio-visual aids, software and hardware and ICT for teaching Mathematics
- Unit plan and lesson planning in Mathematics, Teaching points of various content areas in Mathematics like Arithmetic, Algebra, Geometry and Trigonometry etc.

UNIT IV

- Evaluation in Mathematics: purpose and procedure.
- Teaching mathematics to Gifted and backward children, their identification and provision for mathematics education; remedial teaching: its meaning, principles of diagnosis and remediation.
- School activities (inside and outside) for popularization of Mathematics.
- Qualities and competencies of an effective Mathematics Teacher.

Practicum

- Practical exercises on Programmed instruction & CAI.
- Construction & standardization of Achievement test.
- Analysis and evaluation of syllabus for stage of education in secondary school.
- Construction of a diagnostic Test.
- Preparation of list of equipments essential for teaching mathematics in school.
- Preparation of teaching aids.
- Essentials of mathematics Library and Mathematics laboratory
- Preparation of Lesson Plan.

Books Recommended:

1. Chadha, B.N. : Teaching of Mathematics
2. Dharamabir and Agrawal: The Teaching of Mathematics in India.
3. Rawat, M.S. and Agrawal : M.B.L. : Ganit Shikshan

4. Schultz, A.: The Teaching of Mathematics in Secondary School.
5. Arora, S.K. (1988). *How to teach Mathematics*, Shanta Publisher, Bhiwani.
6. Chauhan, C.P.S, (1985). *Achievement in Algebra and structure of Intellect*, V ishwa vidyalaya Prakashan, Varanasi.
7. Kumar, S, and Ratnalikar, D.N. (2003). *Teaching of Mathematics*, Anmol Publishers, Pvt. Ltd., New Delhi.
8. Russel, J., (2004), *Teaching of Mathematics*, Campus Book International, New Delhi.
9. Sidhu, K.S. (1982), *Teaching of Mathematics*, Sterling Publisher Pvt. Ltd. New Delhi.
10. Richard Courant & Herbert Robbins: *What is Mathematics*, Fai Lawn Oxford University Press, 1941.
11. Cosrines: *The Mathematical Sciences – A Collection of Essay* M.I.T. Press, 1969
12. *The Psychology of Mathematical abilities in school children*, V.A. Krutstski Chicago University Press, 1976
13. *How Children Learn Maths: Teaching Implications of Piaget’s Research*, Rechard Copelard, New York, Macmillan, 1975.
14. *How to Solve It*, G. Polyn Garchen City, Double Day & Co., 1958
15. *The Principle of Objective Testing in Mathematics*, Fraser Cillam, 1971
16. *Teaching of Mathematics* by I.W.A. Young.
17. *Teaching of Mathematics in the New Education* by N.K. Kuppuswami Aiyangar

B-201-B: PEDAGOGY OF PHYSICAL SCIENCES

Objectives

The pupil teacher will be able:

- To develop the pedagogic understanding of pupil-teachers in sciences in context of school and learner.
- To equip student teacher to promote understanding of sciences in learners.
- To organize pedagogic study of subjects in sciences at school level in collective way.

- To facilitate philosophical & epistemological insights of science teaching in pupil teacher.
- To enrich knowledge and teaching competency of pupil teacher.
- To equip pupil teacher with necessary skills for acting as a mediator between school and society.

Unit 1

Meaning of science & Its nature, need & importance, objectives of teaching science. Values of science. History of science teaching in India Contribution of Indian & Foreign scientists: Aryabhata, H.J.Bhabha, J.C.Bose, C.V.Raman A.P.J.Abdul kalam, Eienstein ,Newton,Stephen Hawkins, Landmark discoveries and inventions in science .Aims and objectives of science teaching at Upper primary &Secondary level . Bloom's taxonomy ,Revised taxonomy of Educational objectives ,Use of taxonomy , RCEM approach, Writing objectives in behavioural terms. Organising learning experiences for achieveing learning outcomes.

Unit 2

Major methods, strategies & techniques of science teaching ; Classification of teaching methods:Autocratic & Democratic methods. Non formal approaches in science teaching, science club, science fairs and excursions, science museum, science journal, Organising co-curricular activities in science teaching.

Unit3

Curriculum in science teaching,Critical appraisal of science curriculum, Principles of curriculum construction .Modifying curriculum according to following: 1 Learner ,local needs and children with diverse needs.Text books and reference books in science teaching.

Unit 4

Science teacher :Personal & professional qualities of a good science teacher at primary Upper primary & secondary level. Role of science teacher in educational and vocational guidance & counselling . Teaching skills in science teaching, Content analysis and identifying the concepts Lesson plan, annul plan, unit plan Micro teaching , SSST, Team teaching, Seminar presentation, CAI. Edgar Dale's Cone of Experience, Selection and use of teaching

aids in science teaching for Upper primary and Secondary level. Use of ICT and multimedia in teaching science. Improvised apparatus in science teaching.

Unit 5

Evaluation in science teaching . Measuring cognitive ,affective and psychomotor out comes. Formative & Summative evaluation, CCE, CGPA grading system, Achievement & diagnostic tests. Techniques of evaluation at upper primary & secondary level .Organising remedial teaching.

Practicum :

Preparation of two or three assignments or Ppt. presentations on the contribution of Indian & foreign scientists and latest discoveries in science

Preparation of individual projects on audio –visual aids.Preparing two teaching aids,(once chart and one stationary or working model) Preparing science kit and improvised apparatus in science for upper primary and secondary level students.

Writing reports on the prevailing curriculum in the text books.Visit to community to search the science in local community which could be included in the curriculum & presenting the report. Preparation of micro LP , lesson plans.

Practical exercises on Programmed instruction & CAI.

Construction & standardization of Achievement test.

Books Recommended:

Teaching of Physical Science S.P.Kulshrestha and Gaya Singh

Bhawtik Vigyan Shikshan Dr.A.B.Bhatnagar

Bhawtik Vigyan Shikshan J.K. Sood

Teaching of Science M.S.Yadav

Vigyan Shikshan A.K.Kulshrestha & N.K Kulshrestha

B-201-C: PEDAGOGY OF BIOLOGICAL SCIENCE

Objectives

The pupil teacher will be able:

- To acquire an understanding of and to contribute towards curriculum development as a reflective practitioner.
- To apply learning experiences and educational aids to teaching biology in the classroom.
- To enable to understand the forward linkages through an exposure to possible course / vocations options after school.
- To develop competencies, skills and abilities needed to transact, critically analyze and evaluate the biology curriculum.
- To develop teaching skills for conducting theory and practical lessons.
- To develop conceptual understanding related to the pedagogy of biological sciences.
- To develop scientific attitude among the learner.
- To understand the nature of biology its aims, values & objectives of teaching biological sciences.
- To understand the different strategies of teaching biological sciences.

UNIT: I

DEVELOPMENT OF BIOLOGICAL SCIENCE AND PURPOSE OF ITS TEACHING

- Nature & Concept of Biology
- Correlation of Biology With other subjects (Interdisciplinary Approach)
- Development of Biology in Indian Context & International context.
- Understanding contemporary issues in relation to biology (e.g. environment, gender etc.) in a developmental context.
- Values and Aims of teaching biological science
- Recommendations of Kothari Commission, NPE 1986, NCTE 2006, NCF 2005 & NKC 2007 & NCFTE-2010 with regard to biological science.
- Taxonomy of Educational Objectives of biological science

UNIT –II

CURRICULUM DEVELOPMENT

- Definition of curriculum
- Principles of curriculum organization

- Critical analysis of current biological curriculum at secondary and senior secondary level.
- Qualities of a good science text book

UNIT- III

METHODS AND STRATEGIES OF BIOLOGICAL SCIENCE TEACHING

- Programme instruction
- Micro teaching
 - Team teaching
 - Simulated teaching
 - Development of Year plan,Unit plan, Lesson plan(*design, approaches & writing the plan*)
 - ICT based instruction
 - Methods of teaching biological science.
 - New trends in teaching of biology at national and international levels, learning to teach a selected portion of course with innovative techniques.
- Concept of teaching aids, Principles of using T.A.
- Edger Dale's cone of experience
- Selection & sources of learning experience
- classification of teaching aids
- Integrating multi- media systems (**ICT**)for science education

UNIT- IV

EVALUATION & ASSESSMENT

- Concept, Types & Importance of Evaluation ,CCE.
- Preparation of blue print
- Tools of Evaluation for Biology
- Construction of a effective Question Bank
- Action Research
- Remedial Teaching

UNIT – V

STRENGTHENING BIOLOGY TEACHING & THE SCIENCE TEACHER

- Science clubs, Eco clubs, Science museums, Science fairs, Field trips, Science exhibitions,
 - Science library
- Celebration of important days & events related to science and there relevance

- e-learning in the science classroom
- Talent Search Competitions in Science
- Biology laboratory & Improvised apparatus
- Qualities of a Effective biology Teacher
- Professional Growth of a biology Teacher
- Moral and ethics in biology Teacher
- Sensitivity in biology Teacher
- Development of Soft Skills
- Professional competencies and abilities of a senior biology teacher - including organizing seminars, workshops, providing resource support.

PRACTICUM

- Comparative and analytical study.
- Material development
- Framing content as per
- Programme instruction
- Development of lesson plan based on using 6e's (Engage ,Explore, Explain ,Elaborate, Evaluate, Extend)with the help of ICT
- Drafting /designing instructional objectives & instructional programme
- Content analysis & framing curriculum (on different topic)
- Development of instructional material related to methods school teaching
- Teaching aid formation
- Collection of various audio and vedio clippings with reference to content
- Assignment
- Group disscussion
- Blue print formation.
- Construction of improvised apparatus
- Organising activities under science , eco clubs
- Organising science fair and exhibition at school level
- Preparation and analysis of achievement tests for periodic assessment.
- Continuous assessment - developing learner profiles and portfolios.
- Action Research.

Suggested Readings

- Collete, Alfred T. and Eugene L. Chiappeta, Science Instruction in the Middle & Secondary Schools; Macmillan: N.Y. 1994.
- UNESCO, Source Book for Science Teaching; UNESCO: Paris, 1966.
- Siddiqi & Siddiqi: Teaching of Science Today and Tomorrow, Doaba House, New Delhi, 2002.
- Martin R., Sexton, C. Wagner, K. Gerlorich, J : Science for all Children : Allyn & Bacon : USA, 1998.
- Jerry Wellington. Teaching Science in Secondary Classes; Routledge, USA, 1996.
- Tony Turner & Wendy Dimareo : Learning to Teach Science in Secondary School, Routledge Publication, USA, 1998.
- Vaidya N., Science Teaching for the 21st Century, Deep and Deep Publishers, 1999.
- एम० के० गोयल :पर्यावरण शिक्षा,विनोद पुस्तक मंदिर , आगरा-२
- Sashi Kiran Pandey:Teaching of Science: R.Lall Book Depot, Merrut.2011.

B-201-D: PEDAGOGY OF ENGLISH

Objectives

The pupil teacher will be able:

- To understand the nature and characteristics of English language
- To gain insight into general theories of language development.
- To understand the traditional as well as modern techniques and methods of teaching English and find ways as to how they could effectively be used in the classroom.
- To know how to plan different types of lessons in English with the help of the given guidelines and execute the same in a classroom situation.
- To develop thorough familiarity with the various textual items like prose, poetry, short stories, etc. and how they can be used for conducting various learning activities

Course Content

UNIT I

- Nature and characteristics of English Language, its place in Indian schools as a subject.
- Factors influencing development of English language.
- Theories of N. Chomsky and B. Bernstein about language development.
- Aim and objectives of teaching English, Writing objectives in behavioural terms, Bloom's Taxonomy.

UNIT II

- Methods of teaching English – Direct method, grammar-translation method, bilingual method.
- Principles and maxims of teaching
- Structural approach, situational approach, communication approach,
- Constructivist approach, Learning by doing

UNIT III

- Language Skills-Listening, reading, speaking and writing, Development of language skills, Role of drill.
- Teaching of prose, poetry, novel, drama, grammar, translation and composition.
- Lesson Plan in teaching of English.
- Organising co-curricular activities

UNIT IV

- Use of audio-visual aids, software and hardware and ICT for teaching English.
- Assessment and evaluation of learning outcomes, CCE, Qualities and competencies of an English teacher.
- Preparation of Achievement test (blueprint). Developing question papers.
- Action Research, Organizing remedial activities.

Practicum

- Preparation of lesson plans for teaching various types of lessons in English (one of each type)

- Survey of the English courses and text books in use (one class) / Text book analysis,
- Listening to models of good English speech and recorded materials
- Practice in correct spoken English through conversation, oral-reading, story telling, recitation and public speaking exercises.
- Constructing objective based test items of different types and unit test and Quiz competition.
- Designing and developing program to enhance Listening, Speaking, Reading and Writing skills.
- Developing model question paper in English/ blueprint as per blooms taxonomy
- Calligraphy competition
- Maintaining story and poem folders
- Organising drama and skits.
- Story telling competition
- Organising debates
- Workshop for developing teaching aids.
- Visit to Language Laboratory
- Action Research.

Books Recommended

1. Menon, T.K.N. and Patel, M.S. : The teaching of English as a Foreign Language
2. Bhandari and others: Teaching of English – Longmans.
3. O'Conner, J.D.: Better English – Pronunciation.
4. Agnihotri, R. K. & Sharma, A. L. : English Language Teaching in India- Issues & Innovations.
5. Allen, H. B. & Campbell, R. P. : Teaching of English as a Second Language.
6. Chaudhary, N. R. : Teaching English in Indian Schools.
7. Hornby, A. S.: Teaching of Structural Words.
8. Mukalel, J. C. : Approaches to English language Teaching.
9. A.R. Bisht: Teaching of English.
10. Geeta Rai: Teaching of English.

हिन्दी शिक्षण पाठ्यक्रम के उद्देश्य:-

- 1- भाषा ds egRo l s voxr dj kukA
- 2- शुद्ध भावाभिव्यक्ति की योग्यता का विकास करना।
- 3- शुद्ध साहित्य के सृजन के गुणों का विकास करना।
- 4- भाषायी कुशलता का विकास करना।
- 5- fglnh dh fofHklu fo/kkvka l s voxr dj kukA
- 6- भाषा शिक्षण की विधियों से अवगत कराना।
- 7- हिन्दी पाठन, लेखन, उच्चारण और वर्तनी की शुद्धता से अवगत कराना।
- 8- हिन्दी शिक्षण की नवीन विभिन्न सहायक सामग्रियों से अवगत कराना।
- 9- fglnh ea eW; kadu dh n{krk l s voxr dj kukA
- 10- fglnh ea i kB; l gxkeh fdz; kvka l s voxr dj kukA

bdkbz	विशय-वस्तु	xfrfof/k@ vH; kl dæ
1- भाषा शिक्षण का egRo	अर्थ, परिभाषा, स्वरूप, महत्व, विशेषताएँ, उद्भव और विकास, सामान्य उद्देश्य और भारतीय संविधान में भाषा का स्थान। हिन्दी शिक्षण की मुख्य विधाओं का अर्थ प्रकार एवं महत्व, उपयोगिता गद्य शिक्षण, पद्य शिक्षण, व्याकरण शिक्षण कहानी, निबंध, ukVdA भाषा के रूप- मौखिक भाषा एवं लिखित भाषा, महत्व उद्देश्य, आवश्यक गुण।	l eig ppkz okn&fookn शैक्षिक पत्र-पत्रिकाओं का l Ei knu
2-हिन्दी शिक्षण dh fof/k; kj	अर्थ, प्रकार, गुण, दोष, आवश्यकता एवं विशेषताएँ वाचन- अर्थ, परिभाषा, महत्व, प्रकार i Bu] ys[ku] mPpkj .k] orLuh vfHki k; महत्व व आवश्यकता	0स्तुनिश्च प्रश्नों का निर्माण कियात्मक षोध
3- fglnh शिक्षण में uokpkj	नवाचार- अर्थ, परिभाषा, प्रकार vkj mi ; kfXrkA fglnh ea dEl; Wj dk iz; kx , oa uohu दृष्य-श्रव्य सामग्रियों का अर्थ, प्रकार, उपयोगिता, आवश्यकता।	dEi ; Wj ea i kB ; kstuk dk i k: lk rS kj djukA ekWMy dk fuekZ kA प्रश्न मंच का आयोजन।

<p>4- i kB; &i qrd , oa i kB ; kst uk</p> <p>5- funkukRed शिक्षण</p> <p>6- eH; kdu , oa fdz; kRed शोध</p>	<p>हिन्दी शिक्षक के गुण, कर्तव्य, महत्व, nkf; RoA</p> <p>हिन्दी भाषा शिक्षण में पाठ्य सहगामी fdz; kvka s vfHki k;] i xdkj] egRo , oa आवश्यकता।</p> <p>i kB; i स्तकों का अर्थ, आवश्यकता, प्रकार, vklUrfjd , oa ck°; xq k vkj vkykpukA</p> <p>सूक्ष्म शिक्षण एवं वास्तविक कक्षा शिक्षण में अन्तर, पाठ योजना का अर्थ, परिभाषा i xdkj] egRo] ki kuA</p> <p>निदानात्मक शिक्षण का अर्थ, प्रकार, आवश्यकता एवं महत्व।</p> <p>विशेष आवश्यकता वाले बच्चों dh i gpkU एवं शिक्षण उपचार।</p> <p>निःशक्तता का अर्थ, कारण, प्रकार, निदान, fo/kk, j , oa mi yfc/k; kA</p> <p>मूल्यांकन का अर्थ, प्रकार, आवश्यकता, egRoA</p> <p>हिन्दी में कियात्मक शोध अभिप्राय, परिभाषा, mi ; kfXrkA</p>	<p>i kFkfed , oa ek/; fed Lrj dh i qrdka ea dfe; kj , oa qkkj ds qkoA</p> <p>tkx: drk vfHk; ku jsh dk vk; kstuA</p> <p>संगोश्टियों का आयोजन।</p> <p>क्षेत्र भ्रमण एवं शोध कार्य।</p>
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i kB; i qrd& 1- हिन्दी शिक्षण – शिक्षा चतुर्वेदी

2- हिन्दी शिक्षण के आधार– डॉ० सरोज अग्रवाल

3- हिन्दी शिक्षण – डॉ० रामषकल पाण्डे

4- हिन्दी शिक्षण – गिरीष पचौरी, सीमा शर्मा

B-201-F: PEDAGOGY OF SANSKRIT

Objectives

The pupil teacher will be able:

- To explain the nature, need and principles of teaching Sanskrit language.
- To know the concept of value education and the various branches of Sanskrit literature.
- To demonstrate the use of various audio-visual aids.
- To explain the objectives and steps of teaching prose, poetry, composition and grammar of Sanskrit.
- To organize co-curricular activities related to Sanskrit (Shloka recitation, lecture, dramatization and other competitions).

CONTENTS:

UNIT I

- (a) The position of Sanskrit in India. Its historical background, cultural, literary and linguistic values and its relation with modern Indian languages.
- (b) Aims of teaching Sanskrit at different stages. Comparison and contrast with the aims of teaching Hindi and English.
- (c) Stating objectives in behavioral terms with special reference to cognitive, affective and psychomotor domains.

UNIT II

- (a) Need, basis and principles of curriculum construction, Precautions in developing curriculum of Sanskrit.
- (b) The importance of phonetics of Sanskrit and correct pronunciation.
- (c) The importance of audio-visual aids and their use in teaching of Sanskrit.
- (d) Qualities of a good Sanskrit teacher.

UNIT III

- (a) The methods of teaching Sanskrit – The grammatical method, translation method, the analytical method and explanatory method, the direct method and the Herbartian plan. Advantages and limitations of these methods.
- (b) Methods of teaching of different forms at different stages : Prose, poetry, grammar, composition, translation, drama, rapid reader. Aims, methods and plan of teaching.
- (c) Techniques of evaluation. New types of tests in Sanskrit teaching.

UNIT IV

- (a) Construction of a good test keeping in view of the objectives, content and forms of questions, preparation of blue-print.
- (b) Action research in Sanskrit teaching, its meaning, development and utility.
- (c) Importance and use of good handwriting in Sanskrit teaching.
- (d) Lesson-planning.

PRACTICUM:

Discussion, audio-vedio presentation, group task, shloka recitation, quizzes and preparing

objective type questions.

SUGGESTIVE READINGS :

- 1- Sanskrit Shipshan : Dr. Ramshakal Pandey, Vinod Pustak Mandir, Agra.
- 2- Sanskrit Adhyapan Paddhati : Smt Kunda Bhosale, Balaji Bungalow, Gangapur Road, Nasik.
- 3- Modern Methods of Teaching Sanskrit: Bela Rani Sharma, New Delhi.
4. संस्कृत-शिक्षण-डॉ० रामशकल पाण्डेय, विनोद पुस्तक मन्दिर, आगरा ।
5. संस्कृत – शिक्षण- डा० सन्तोष मिततल, आर० लाल बुक डिपो, मेरठ ।
6. संस्कृत शिक्षण- विधि – श्री विजय नारायण चौबे, उ० प्र० हिन्दी संस्थान, हिन्दी ग्रन्थ एकेडमी, लखनऊ ।
7. संस्कृत – शिक्षण- डा० रघुनाथ सफ़ाया, हरियाणा हिन्दी ग्रन्थ अकादमी, चण्डीगढ़ ।
8. संस्कृत – शिक्षण- रमा शर्मा, अर्जुन पब्लिकेशन्स, नई दिल्ली ।

latest editions of all the suggested books are recommended.

B-201-G: PEDAGOGY OF SOCIAL STUDIES

Objectives

The pupil teacher will be able:

- To understand the foundation of teaching Social Studies.
- To review the curriculum of Social Studies at secondary and higher secondary level.
- To acquaint with different strategies for teaching Social Studies at secondary and higher secondary level.
- To acquire skills of preparing teaching aid for teaching social studies.
- To acquire skills of analyzing Social Studies text books’.
- To acquire competence in preparing evaluation tools in Social Studies.

- To prepare achievement test in Social Studies at secondary and higher secondary level.
- To acquaint with Action Research in Social Studies.
- To prepare lesson plans in Social Studies for instructional purposes.

Course Content

Unit 1

- **Social Studies;** Meaning, Nature, Importance and Scope of social studies. Need and justification of social studies teaching as separate subject in school curriculum.
- **Objectives of social studies teaching;** Aims and objectives of social studies teaching, General objectives of social studies teaching (Cognitive, Affective and Psychomotor) in different levels, Scope and Values of social studies teaching,
- **Curriculum and Co-curricular activities in social studies;** Curriculum of Social Studies, Approaches of organization of social studies curriculum (Spiral, Unit and Chronological approaches), Need of co-curricular activities in social studies, Various Co-curricular activities in social studies teaching (Clubs, Excursions, Word search, Puzzles, Quizzes).

Unit 2

- **Instructional Strategies and Methods of Social Studies Teaching;** Importance of Instructional Strategies and Methods in social studies teaching, Ancient and Modern methods of social studies teaching.
- **Teaching Aids in Social Studies;** Need of teaching aids, Principles for use of teaching aids, advantages and problems in using teaching aids, Different types of audio, visual and audio visual aids, Preparation of teaching aids.
- **Textbooks of social aids;** importance, characteristics of good textbooks.
- **Laboratory and Library of Social studies;** Need, Organization and management of equipment and books.
- Use of ICT in teaching Social Studies.

Unit 3

- **Measurement and Evaluation in Social Studies;** Meaning, Aims and Importance of Measurement Evaluation, Formative and Summative Evaluation, Methods of Measurement and evaluation, Educational Diagnosis and Remedial Teaching.
- **Examination and Testes;** Examination and testes (Essay type, short answer and objective type tests), Characteristics of a good examination and tests (Validity, Reliability and Practicability),

- **Unit Test;** Meaning of unit test, Preparation of blue print, Construction of question paper based on blue print. Preparation of answer key.
- **Construction of result;** Evaluate the result.

Unit 4

- **Action Research;** Meaning need and process of action research.

Unit 5

- **Lesson Planning;** Value, importance and types of lesson planning, Steps of lesson planning.

Practicum

1. Explore how different things (movies, magazine, cartoons, and newspapers etc.) can help in teaching social studies.
2. Organize an educational tour of any historical place, industry, dam etc. and prepare a brief project report based on historical, economical, political and geographical background of the place.
3. Prepare a map of any locality.
4. Write a review report of SST textbook of secondary level.
5. Develop a question paper based on blue print, administer it in class and prepare result.
6. Survey any secondary school and organize an action research on any classroom or management based problem.

Book Recommended

1. Guru Saran Das Tyagi : Samajik Adhyayan Shikshan.
2. Dr. Gajendra Singh Tomar : Samajik Vigyan Shikshan.
3. S.K. Kochar : Teaching of Social Studies.
4. J.C. Agarwal : Teaching of Social Studies

B-201-H: PEDAGOGY OF COMMERCE

Objectives

The pupil teacher will be able:

- Understand the meaning, aims & objectives of commerce teaching.
- Understand the various approaches of teaching of commerce.

- Understand different methods of teaching, techniques & devices and use of various teaching aids.
- Prepare Lesson Plan properly & understand the Evaluation & assessment techniques in commerce teaching.
- Develop the skills of Diagnostic & Remedial teaching.

COURSE CONTENT

UNIT I

- Meaning, Nature and scope of commerce teaching.
- Aims & objectives of teaching commerce at higher secondary stages.
- Importance of commerce as a discipline and place of commerce in school curriculum.
- Correlation of commerce with other subject.
- Professional traits of a commerce teacher.

UNIT II

- Approaches of commerce teaching & its implementation in commerce teaching.
- Critical study of the existing textbook of commerce & suggestion for improvement.
- Laboratory of commerce teaching & co-curricular activities for commerce teaching.
- Commerce Room its need, organization & equipments.

UNIT III

- Teaching Methods of commerce teaching: Project, Discussion, Problem-solving, Analytical & Synthetics, Socialized Recitation, logical obscuration, Seminar etc.
- Techniques & Devices in commerce teaching, principles & marums of classroom teaching.
- Equipment for effective instruction and classroom Arrangement
 - i. Audio-Video Aids.
 - ii. Media.
- Different types of test (Essay type, short Ans. Type, objective type) their contraction & administration.

UNIT IV

- Innovations in commerce teaching: Micro teaching, Team teaching, Simulated teaching, Programmed Instruction etc.
- Lesson Planning for commerce teaching. Its need & importance in assessment in commerce teaching.
- Evaluation & assessment in commerce teaching.
- Preparation of a model Question-Paper along with its blue-print from textbook of commerce.

UNIT V

- Different aspects in commerce teaching: Teaching of book keeping, teaching of commercial practice, teaching of type writing & short hand.
- Exploitation of Local resources in teaching of commerce (visit to offices & Factories).
- Diagnostic & Remedial teaching in commerce students at secondary school.

Practicum

- Assignments, Presentations on ppt. Library visit, Unit test.
- Preparing teaching Aids, Project on real classroom observations, constructions of different types of question paper.
- Simulated teaching preface, preparing Lesson Plan, School visit, practice teaching in real classroom.
- Type – writing & short hand, visit to offices & Factories, unit test etc.

B-202: SUBJECT KNOWLEDGE

Objectives

The pupil teacher will be able:

- To understand the level of understanding of learner at a particular age.
- To analyze the content of subject matter included.
- To revise the concepts already learnt.
- To decide the better method of teaching the content.
- To identify the individual difference(s) and imply it in actual classroom situations.

Course Content

Content of class IX and X (CBSE and Uttarakhand Board).

Practicum

- Project on issues related to subject.
- Unit test.
- Presentations on subject topics.

B-202: SCHOOL ORGANISATION AND MANAGEMENT

Objectives:

The Pupil teacher will be able:

- To understand the term's organization administration and management.
- To understand the meaning, purpose and characteristics of school as an organization.
- To identify the educational structure in India.
- To explain the role of leadership for innovation & change.

Course Content

Unit I: SCHOOL AS AN ORGANIZATION

- Concept of management and administration.
- Organization: Meaning, Purpose & characteristics.
- Types of School Boards: CBSE, ICSE, IB, State Board of Uttarakhand.
- School accreditation: Need & Criteria.

Unit II: EDUCATIONAL STRUCTURE IN INDIA

- Structure & function at different levels: center, state, district, university level.
- Functions of apex bodies at center level: CIBE, NCERT, UNEPA, UGC, NCTE, KVS, NVS, IGNOU.
- Functions of apex bodies at state level: SCERT, DIET, SRC, CRC, BRC.
- Decentralization of Education with reference to the role & functions of PRI's.

Unit III: MANAGEMENT OF SCHOOL EDUCATION

- Management Process: Planning, Organization, Directing & Controlling.
- Managerial Skills, Concept Skills, Human Skills.
- Key responsibility areas of Principal & teacher (s).
- Leadership: concept & the content of innovation & change.

Unit IV: INNOVATIONS IN CLASSROOM MANAGEMENT

- Classroom as a subsystem of school system.
- Classroom without boundaries.
- Open & virtual classrooms.
- Constructivist classroom.

Practicum

- Study the different management functions in schools.
- Organize one/more events.
- Study the leadership style of school principal.
- Formalities inside a virtual classroom.

Books Recommended:

1. Agarwal, J.C.: Educational Administration, Management & Supervision, Aryov Book Depot.
2. Bhatt, B.D. & Sharma, S.R: Education Administration: Kanishka Publ. house.
3. Campbell, E.: Introduction to Educational Administration.

4. Tayles, G.: The Teacher as Manager, NCERT.

B-203: EDUCATIONAL TECHNOLOGY AND ICT

Objectives

The student teacher will be able:

- To familiarize with fundamentals of ICT.
- To get aware about the use of ICT in Education.
- To develops the skill to use multimedia.
- To utilize ICT for solving educational problems.

Course Content

Unit I: EDUCATION TECHNOLOGY

- Origin & Meaning.
- Nature, Scope, Needs & type.
- Educational Technology & Technology in Education.
- Programmed Learning.

Unit II: EDUCATION AND THE MASS-MEDIA

- Radio, TV & films: Uses, Advantages & Limitations.
- Current status of mass media in education.
- Role of teacher in using mass media.
- Open Education Resources.

Unit III: ICT & MULTIMEDIA

- Role of teaching- learning Process.
- Computer as a learning resource.
- Internet as an information resource.
- Computer- Assisted Interaction.

Unit IV: ADVANCED TECHNOLOGY IN EDUCATION

- Working of hardware(s): OHP, LCD, Computer and CCTV.
- Online learning and networking, e-mail, tele-conferencing.
- Role of CIET, UGC & IGNOU.

- EDUSAT, Educational Television & Games.

Practicum

- Development of Computer aided materials, slides, power-points etc.
- Use of internet, e-mail.
- Critical review of educational programme.
- Online Process.
- Unit test.
- Hands on experience as Computer.

Book(S) Recommended

- 1- Davis, I.K.: The Management of learning.
- 2- Smith & Moore: Programmed Learning.
- 3- Sharma, R.A. : Shiksha Takhiki.
- 4- Mangal, S.K. : Fundamentals of Educational Technology, Prakash Brothers.
- 5- Dececoo, J.P. : Educational Technology Readings in Programmed Instruction.