B.Ed OPTIONAL COURSE
COMPUTER SCIENCE II

OBJECTIVES

At the end of the course, the student - teachers will be able to

- develop interest and appreciate various pedagogical principles in teaching of computer science.
- acquire knowledge on preparing and using Computer Assisted Instruction programmes..
- acquire the knowledge relating to the organization and administration of computer laboratory
- understand the need for methods of evaluating the class room teaching behavior.
- acquire knowledge on computer software and growing capability of computer technology.
- acquire knowledge on latest trends in Information Technology and assessment techniques..

UNIT I Techniques in the Teaching of Computer Science

Brainstorming – Buzz session – Simulation -Seminar-symposium-group discussion-panel discussion-workshop techniques – Programmed learning – Team teaching.

UNIT II Computer Science Teacher

Academic and professional qualification – special qualities required for a computer science teacher- Need and importance of in service training of a Computer Science teacher.

UNIT III Evaluation Of Teachers

Rating by supervisor or colleagues-evaluation by pupils- self-evaluation-classroom interaction analysis.

UNIT IV Planning And Maintenance of Computer Laboratory

Need for planning the computer laboratory – special features of computer laboratory-essential infrastructure- laboratory management – organization of practicals for pupils – maintenance of records- discipline in the laboratory.

UNIT V Computer Education

COMPUTER SOFTWARE ; Categories of software different procedures for acquiring software advantages – the ethical and practical issues involved in the software piracy

COMPUTER TECHNOLOGY; The growing capability of computer technology- use of robots- artificial intelligence- office automation.

UNIT VI Writing (CAI) Instructional Programmes

A systematic plan for developing CAI programmes.

Designing a CAI lesson; specification of objectives – front-end analysis- outcome specification of lesson design- Lesson development- lesson validation.

Common CAI frames; Introduction- menu page- teaching frames- criterion test frame – feed back (remedial) frames- reinforcement frames- graphics frames.

UNIT VII Classroom Management

Classroom management : meaning, factors influencing classroom management – significance of classroom climate – teacher dominated, laissez-faire and democratic patterns.

UNIT VIII Educating The Exceptional Children

Slow learners – remedial measures for the slow learners - Gifted children – identification and enrichment programme for the gifted children – role of the teacher in such directed study programme.

UNIT IX Latest Trends In Information Technology

Multi media – desk top Publishing – Internet and its uses – E-learning: definition, meaning, modes of e-learning, characteristics of e-learning, e-learning tools, benefits of e-learning – Virtual Learning – Web enabled/ Based learning – Tele conferencing – Video conferencing .

UNIT X New Developments In Evaluation

E-assessment : definition, types of e-assessment – risk involved in using e-assessment – limitations of e-assessment.

PRACTICALS :

- Construction of an diagnostic test
- Preparation of branched programme material consisting of twenty frames in Computer Science
- Preparation for lesson plan for power point presentation
- Evaluating reports of three web sites in Computer Science

SUGGESTED REFERENCE BOOKS:

Bennett, S., Marsh, D., & Killen, C., (2008). *Handbook of online education continuum.* New York: International Publishing group.

Sharma, R. A. (2008). *Technological foundation of education*. Meerut: R.Lall Books Depot.

Allison, L. J., & Chris, P. (2007). *Preparing for blended e-learning*. UK: Routledge.

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Goel, H. K. (2005). *Teaching of computer science*. New delhi: R.Lall Books.

Krishnamurthy, R. C. (2003). *Educaitonal technology: Expanding our vision*. Delhi: Authors Press.

Joyce., & Well., (2004). *Models of teaching*. U.K: Prentice hall of India.

Suri, R. P. (2002). *Graphic programming in C & windows*: New Delhi: Khanna Book Publishers.

Alexis, M. L.(2001). *Computer for every one*. New Delhi: Vikas Publishing house Ltd.

Sundararajan, K. (1998). *Internet*. Chennai: Kannadhasan Publications.

Kumar, K. L. (1997). *Educational technology*. New Delhi: Angel International (P) Ltd.

Kochhar, S. K. (1992). *Methods and techniques of teaching*. New Delhi: Sterling Publishers Pvt Ltd.

Verma, R. (1990). *Modern trends in technology*. New Delhi: Anmol Pubblication.

Chauhan, S. S. (1985). *Innovations in teaching learning process*. New delhi: Vikas Publishing house Ltd.

Stephen, M. A., & Stanely, R. (1985). *Computer based instruction: Methods and development*. NJ: Prentice Hall.

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