B.Ed. Two Year Programme

E.3 : Computer and Web Technologies in Education

Maximum Marks: 100

Aim

The course intends to develop an understanding of use of Computers and Web technologies in Educational Context. Specifically the Course will have the following aims: Become aware of fundamentals of computers and widespread use of various application software in education; become familiar with web technologies and their role in pedagogical approaches; become aware of the potential and practical issues / problems of computer and web technologies usage in their own subject area.

Unit I: Computers in Education

Fundamentals of Computer

- Hardware and Software
- Troubleshooting, Networking and Internet Security

Introduction to Application Software in Education

- Proprietary and Open Source Software
- Generic (Office, VUE etc.) and Subject specific application software
- Assistive technologies in Education

Unit II: Web Technologies in Education

- Introduction to Web technologies: Web.1.0, Web.2.0, & Web.3.0
- Web 2.0 technologies for classroom learning
- Learning Objects: concept and its applications to educational contexts
- Computer / web supported pedagogical approaches (Computer Assisted Learning (CAL), Problem Based Learning, Project Based Learning, etc.)
- Computer / Web Technologies in School Administration
- Web tools for assessment of/for learning
- Information literacy: Concept, Components, Standards, and its application to educational contexts

Unit III: Introduction to programming

- Basic, LOGO, and C

Unit IV: Issues related to Technology Integration in Education

- Practical issues in integrating computer and web technologies for classroom learning

Sessional Practical

Project Work (in small groups) on subject specific themes using application software and web technologies

References

Centre for Educational Research and Innovation. (2007). Open Educational Resources – Conceptual Issues. In Giving Knowledge for Free: The Emergence of Educational Resources. OECD.

Doering, A.&. (2009). Teaching with Instructional Software. In M. R. Doering (Ed.), Integrating Educational Technology into Teaching (pp. 73-108). Upper Saddle River, NJ: Pearson Education.

Lockyer, L. B. (2009). *Handbook of Research on Learning Design and Learning Objects: Issues, Applications, and Technologies.* Hershey: Information Science Reference.

Song, H. &. (2010). Handbook of Research on Human Performance and Instructional Technology. Hershey: Information Science Reference

UNESCO.(2015). Copyright. In Open Access for Researchers: Intellectual Property Rights. Paris: UNESCO

Web Links:

A complete resource to learn C Programming. (2014, December 25). Retrieved from fresh2refresh.com: http://fresh2refresh.com/

Assistive Technology Partnership.(2008). Assistive Technology in Education. Retrieved December 14, 2014, from http://www.atp.ne.gov/techassistdoc.html

Computer Networks and the Internet. (2015, March 10). Retrieved from http://wps.aw.com/wps/media/objects/221/227088/Chapter1preview.pdf

http://creativecommons.org/licenses/

http://opensource.com/education

University of Oxford . (2014, December 14). *Open Source Options For Education*. Retrieved from OSSWATCH: http://oss-watch.ac.uk/resources/ossoptionseducation