

Core X

ICT in Education

Course Outcomes (COS):

On completion of the course, the student will be able to

- Understand the concept of educational technology and ICT in education
- Explain the concept, nature, and scope of ICT in Education.
- Explain the relationship between information technology, communication technology and information and communication technology.
- Describe the importance of the Free and Open-Source software in education
- Demonstrate the use of various application software in education.
- Develop the ability to use various tools connect the world.
- Explore tools and techniques of ICT for assessment and evaluation.
- Understand the ethical, social and legal issues of ICT in education
- Appreciate the various policy and practice of technology in education

Course Content:

UNIT I Educational Technology

- Meaning, nature, and scope of educational technology
- Needs and importance of educational technology for the teachers and students.
- Approaches to educational technology: Hardware, software, and system approach.
- Innovations in educational technology: Open Educational Resources (OER). Massive Open Online Course (MOOCs)

UNIT II ICT in Education

- Conceptual Understanding: Information Technology, communication technology, and Information communication and technology (ICT)
- Meaning, nature, and Scope of ICT in Education
- Integration of technology: technology, Pedagogy, and content (TPACK), assessment and evaluation
- Relevance of ICT in education

UNIT III ICT Ecosystem in school

- ICT for teaching and Learning: Hardware, application Software and FOSS
- ICT for planning: Scheduling educational activities, ideating, and organizing events
- ICT for documentation and classroom management: creation, storing, retrieval, manipulation and sharing of digital information.
- ICT for assessment: e-portfolio, rubrics, concept map, digital storytelling, hot-potatoes.
- ICT for continuous professional development: webinar, web conference, e-groups, MOOCs etc.

UNIT IV Emerging Issues of Educational Technologies

- National Policy on ICT 2013, NEP 2020, Curricula for ICT in Education
- ICT for inclusion: assistive and adaptive technology.

- Social, ethical and Legal Issues of ICT: Security threat and measures, cyber privacy and netiquette, ethical practices in cyber space, cyber law, and cyber safety.
- Challenges of ICT in education.

Practicum (30 Marks) (Any two of the following)

1. Create and Develop a LMS using google classroom and design various teaching, learning and assessment activities.
2. Use assessment tools like rubistar, hot potatoes and c-map tools on any topic and submit the report.
3. Prepare a PowerPoint presentation on any topic from the course and present in the form of seminar.
4. Attend an online programme on cyber safety and security from any National or International organization and prepare a report on cyber safety and security.

Suggested Readings:

- ✓ UNESCO (2002). *Information and communication technology in education: a curriculum for schools and programme of teacher development*. Paris: UNESCO.
- ✓ UNESCO (2005). *How ICT can create new, Open learning environments: Information and communication technologies in schools: A handbook for teachers*. Paris, UNESCO

Reference Books

- ✓ Mitra, Ananda. (2010). *Digital Security: Cyber Terror and Cyber Security (The Digital World)* Chelsea House Publications
- ✓ Zhang, J., Yang, J., Chang, M., & Chang, T., (Ed) (2016). *ICT in Education in Global Context: The Best Practices in K-12 Schools*. Springer Singapore
- ✓ Haydn, T., & Counsell, C., (2003). *History, ICT and Learning in Secondary School*. Routledge.
- ✓ Howell, J., (2012). *Teaching with ICT: Digital Pedagogies for Collaboration and Creativity*. Oxford University Press
- ✓ Florian, L., & Hegarty, J., (2004). *ICT and Special Educational Needs (Learning and Teaching with Information and Communication Technology)*. Open University Press.
- ✓ Senapaty, H.K. (2011). *Pedagogy-Technology Integration for the Professional Development of Teacher Educators*. Bhubaneswar: Regional Institute of Education (NCERT) Monograph.
- ✓ Senapaty, H.K. (2009). *ICT Integrated Learning Materials on Basic School Subjects from Constructivist Perspectives: Bhubaneswar: Regional Institute of Education (NCERT) Monograph*.
- ✓ Singh, L.C. (Ed) (2010). *Educational Technology for Teacher and Educators*. New Delhi: Vasunandi Publication.
- ✓ Agarwal, L.P., (2015). *Elementary Educational Technology*. Black Prints, New Delhi
- ✓ Pathak, R.P., & Chaudhary, J. (2012). *Educational Technology*. Pearson. New Delhi
- ✓ Huang, R., Spector, J.M., & Yang, J., (2019) *Educational Technology: A Primer for the 21st Century*. Springer
- ✓ *Curricula for ICT in Education (2013) NCERT, New Delhi*
- ✓ *National Policy on Education (2020), Ministry of Education, Govt. of India,*

- ✓ *National Policy of ICT (2013) Ministry of Education, Govt. of India*
- ✓ *Feller, J., Fitzgerald, S., Hissam, S.A., Lkahani, K.R., Shirky, C., & Cusumano, M., (2005). Perspective on Free and Open Source Software. MIT Press.*
- ✓ *Sulayman, K.S., Stamelos, I.G., & Samoladas, I., (2007). Emerging Free and Open Source Software Practice. IGI Publishing*
- ✓ *Dexter, S.D., & Chopra, S., (2008). Decoding liberation: the promise of free and open source software. Routledge*