

Course Code	Course Name	Credits
26ED513	EDUCATION 4.0 AND DIGITAL PEDAGOGY	04

Course Objectives

The course aims to,

- ✓ Develop understanding of Education 4.0 and its technological foundations.
- ✓ Familiarize learners with digital pedagogy and innovative teaching strategies.
- ✓ Enhance skills in integrating ICT and digital tools in education.
- ✓ Promote critical analysis of digital learning environments.
- ✓ Encourage ethical, inclusive, and responsible use of technology.
- ✓ Prepare learners for digital leadership and future educational trends.

Learning Outcomes

After the completion of the course, the Learner will be able to,

- ❖ Explain the concepts and characteristics of Education 4.0.
- ❖ Apply digital pedagogical strategies in teaching-learning processes.
- ❖ Analyze the effectiveness of digital learning environments.
- ❖ Evaluate ethical and policy issues in digital education.
- ❖ Design technology-integrated learning experiences.
- ❖ Demonstrate digital competence and lifelong learning skills.

Unit 1 - Foundations of Education 4.0 (12 hours)

Concept and evolution: Education 1.0 → 4.0-Industrial Revolution 4.0 and its impact on education-Characteristics of Education 4.0-NEP 2020 and digital transformation-21st-century skills and competencies.

Unit 2 – Classical Thinkers (12 hours)

Concept of digital pedagogy-Learning theories in Digital Context: Constructivism,Connectivism-Technology integration models: TPACK, SAMR-Learner-Centered and Personalized Learning-Blended learning and Flipped Classroom.

Unit 3 - Digital Tools and Learning Platforms (12 hours)

Learning Management Systems (LMS)-MOOCs and Open Educational Resources (OER)-Digital content creation tools-AI-based educational tools and analytics-Virtual classrooms and collaboration tools.

Unit 4 – Assessment and Evaluation in Digital Learning (12 hours)

Digital Assessment Strategies-Formative and Summative Assessment in Online Environments-E-Portfolios and Performance-Based Assessment-Learning Analytics and Feedback Mechanisms-Quality Assurance in Digital Education.

Unit 5 - Ethics, Inclusion, and Future Trends (12 hours)

Ethical issues: Privacy, Data Security, Digital Well-being-Digital divide and Inclusive Education-Universal Design for Learning (UDL)-Future trends: AI, VR, Metaverse, Smart Learning Environments-Innovation and Entrepreneurship in Digital Education.

Reference Books:

1. Teaching in a Digital Age – Tony Bates
2. E-Learning and the Science of Instruction – Ruth C. Clark & Richard E. Mayer
3. The Theory and Practice of Online Learning – Terry Anderson
4. The Handbook of Blended Learning – Curtis J. Bonk & Charles R. Graham
5. Blended Learning in Higher Education – D. Randy Garrison & Norman D. Vaughan
6. Educational Technology – R.P. Pathak & Jagdeesh Chaudhary
7. Trends in E-learning – Mahmut Sinecen

Alignment with NEP – 2020

The course **Education 4.0 and Digital Pedagogy (26ED513)** is designed in alignment with NEP 2020's emphasis on digital transformation, learner-centered education, and future-ready skills. It reflects a modern pedagogical framework integrating technology with education.

1. Enhances the use of ICT, LMS, and digital tools in education
2. Develops Skill-Based and Competency-Oriented Education
3. Improves 21st-century skills such as collaboration, communication, and critical thinking
4. Encourages flipped classrooms, MOOCs, and experiential learning models
5. Introduces digital and performance-based assessment strategies
6. Addresses issues of equity, accessibility, and digital well-being
7. Prepares learners for Future-Ready Education Systems which emerge the trends such as AI, VR, and smart learning environments
8. Supports continuous learning and adaptability in a digital world for Lifelong Learning and Professional Development.
9. Promotes Learner-Centered and Flexible Learning such as personalized, self-paced, and blended learning approaches

COs and Bloom's Taxonomy Level (BTL) Mapping for 26ED513

Course Outcomes	On successful completion of the course, the students will be able to	BTL
CO1	Explain the concepts and principles of Education 4.0 and digital pedagogy	K1 & K 2
CO2	Apply digital tools and pedagogical strategies in teaching-learning	K 3
CO3	Analyze digital learning environments and learner engagement	K 4
CO4	Evaluate ethical, policy, and quality issues in digital education	K 5
CO5	Design innovative digital learning experiences and solutions	K 6

Bloom's Taxonomy Level (BTL):- K1 and K2 – remembering and understanding, K3 - Applying, K4 – Analyse, K5 - Evaluate and K6 - Create

Relationship Matrix

Course Outcomes	Programme Outcomes (POs)								Programme Specific Outcomes (PSOs)							Mean Score of COs
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6	PSO7	
CO1	3	2	1	1	1	1	3	1	3	2	1	1	3	1	1	1.9
CO2	3	3	2	1	2	1	3	2	3	3	2	2	3	2	1	2.4
CO3	2	3	3	1	2	1	3	2	2	3	2	2	3	2	1	2.3
CO4	2	3	2	3	2	2	2	1	2	3	2	3	2	2	3	2.6
CO5	3	3	3	2	2	2	3	3	3	3	3	3	3	3	2	2.9
Total																2.4

Mean Score: 3- High, 2- Medium/Moderate, 1-Low

