

Course Code	Course Name	Credits
26ED006	DIGITAL TOOLS AND AI APPLICATIONS IN EDUCATION	04

Course Objectives

The course aims to,

- ✓ Introduce ICT, digital learning, and AI basics in education.
- ✓ Build skills in digital tools for teaching and collaboration.
- ✓ Explore AI technologies for personalized learning.
- ✓ Address ethical and social challenges of AI integration.
- ✓ Develop AI-enhanced digital learning designs.

Learning Outcomes

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

- ❖ Explain ICT, digital learning, and AI roles.
- ❖ Apply LMS, collaboration, content, and assessment tools.
- ❖ Analyze AI platforms, chatbots, and analytics.
- ❖ Evaluate ethics, digital divide, and cyber safety.
- ❖ Design e-content, MOOCs, and AI lesson plans.

Unit 1 - Introduction to Digital Education and AI (12 hours)

Concept of ICT in education. Digital learning - E-learning, blended learning, mobile learning - Introduction to Artificial Intelligence in education - Role of AI in teaching, learning, and assessment

Unit 2 –Digital Tools for Teaching and Learning (12 hours)

Learning Management Systems (LMS): Google Classroom, Moodle - Digital collaboration tools: Google Workspace, Microsoft Teams - Content creation tools: Canva, PowerPoint, video tools - Online assessment tools: Google Forms, Kahoot.

Unit 3 - AI Applications in Education (12 hours)

AI-powered learning platforms and adaptive learning - Chatbots, intelligent tutoring systems - AI in assessment and feedback. Data analytics in education.

Unit 4 –Ethical, Social and Pedagogical Issues (12 hours)

Ethical issues in AI (bias, privacy, surveillance) - Digital divide and inclusion - Cyber safety and data protection - Teacher's role in AI-integrated classrooms

Unit 5 - Designing Digital Learning Experiences (12 hours)

Instructional design for digital learning - Developing e-content and MOOCs - AI-integrated lesson planning - Project work: Creating digital/AI-based teaching module

Reference Books:

- 1.AI in Education: Transforming Learning and Teaching : Dr. R. D. Padmavathy, Dr. Raju Talreja, Jyoti, Ramshankar Varma and Prof. Meena Sharma
- 2.Educational Technology and ICT : Vijay Kumar Jain
- 3.ICT in Education: Musadir Amin
- 4.Teaching with AI: A Practical Guide to a New Era of Human Learning – Bowen & Watson

Alignment with NEP – 2020

The course **Digital Tools and AI Applications in Education (26ED006)** advances NEP 2020's vision for technology-enabled, equitable, and multidisciplinary learning through ICT integration, AI personalization, ethical tech use, and innovative pedagogy.

1. Builds technology-enabled learning infrastructure.
2. Enables digital tools for collaborative pedagogy.
3. Leverages AI for personalized adaptive learning.
4. Promotes equity, ethics, and digital inclusion.
5. Supports innovative instructional design.
6. Empowers teachers in tech-integrated classrooms.
7. Fosters holistic 21st-century competencies.

COs and Bloom's Taxonomy Level (BTL) Mapping for 26ED006

Course Outcomes	On successful completing of the course, the students will be able to	BTL
CO1	Explain concepts of ICT, digital learning modalities, and introductory AI applications in education	K1,K2
CO2	Apply digital tools (LMS, collaboration platforms, content/assessment tools) for effective teaching-learning processes.	K3
CO3	Analyse AI applications including adaptive platforms, chatbots, tutoring systems, assessment, and data analytics.	K4
CO4	Evaluate ethical, social, and pedagogical issues in AI/digital integration, such as bias, privacy, and digital divide.	K5
CO5	Create AI-integrated digital learning experiences, e-content, lesson plans, and project-based teaching modules.	K6

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	1	3	1	1.7
CO2	2	2	3	1	3	1	3	2	2	2	2	1	3	3	2	2.1
CO3	2	3	3	2	2	1	3	2	2	3	2	2	2	3	2	2.3
CO4	1	3	2	3	2	2	2	1	1	3	2	3	2	2	1	2.0
CO5	2	3	3	2	2	1	3	3	2	3	3	2	2	3	2	2.4
Total																2.1

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