

Course Code	Course Name	Credits
26ED511	AI - ENHANCED CURRICULUM DEVELOPMENT AND INSTRUCTION	04

Course Objectives

The course aims to,

- ✓ Explain concepts of AI and curriculum development models
- ✓ Analyze the role of AI in instructional design and delivery
- ✓ Evaluate AI-based tools for teaching, learning, and assessment
- ✓ Apply AI techniques in designing curriculum and lesson plans
- ✓ Develop innovative, AI-enhanced curriculum frameworks

Learning Outcomes

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

- ❖ Demonstrate advanced knowledge of education and emerging technologies
- ❖ Critically analyze curriculum and instructional practices
- ❖ Apply AI tools in curriculum design and teaching-learning processes
- ❖ Conduct research in curriculum innovation and AI integration
- ❖ Promote inclusive and equitable learning through technology
- ❖ Integrate interdisciplinary approaches in curriculum development

Unit 1 - Foundations of Curriculum Development and AI (12 hours)

Meaning, scope, and principles of curriculum development - Traditional and modern curriculum models-Introduction to Artificial Intelligence in education - Role of AI in transforming curriculum

Unit 2 – AI in Curriculum Design (12 hours)

Competency-based curriculum design; AI-supported curriculum mapping and alignment; Personalized and adaptive curriculum models; Integration of interdisciplinary and skill-based learning

Unit 3 - AI-Enhanced Instructional Strategies (12 hours)

AI tools for teaching and learning (intelligent tutoring systems, chatbots, learning analytics); Adaptive learning platforms; Blended and flipped learning with AI support; Instructional design models (ADDIE, SAM) with AI integration

Unit 4 –AI in Assessment and Evaluation (12 hours)

AI-based assessment tools and automated evaluation; Learning analytics and feedback systems ; Formative and summative assessment using AI ; Ethical issues in AI-based assessment

Unit 5 - Emerging Trends and Challenges (12 Hours)

AI and future of curriculum; Inclusive education and accessibility through AI; Challenges: digital divide, data privacy, algorithmic bias; Policy perspectives and NEP 2020 implications

Reference Books:

1. Anderson, L. W., & Krathwohl, D. R. (2001). A taxonomy for learning, teaching, and assessing. Longman.
2. Bates, A. W. (2019). Teaching in a digital age. BCcampus.
3. Holmes, W., Bialik, M., & Fadel, C. (2019). Artificial intelligence in education. Center for Curriculum Redesign.
4. Luckin, R. (2018). Machine learning and human intelligence. UCL Institute of Education Press.
5. NCERT. (2020). National Education Policy 2020. Government of India.
6. OECD. (2021). AI and the future of skills. OECD Publishing.
7. Pellegrino, J. W. (2014). Assessment and teaching of 21st century skills.
8. Selwyn, N. (2019). Should robots replace teachers? Polity Press.
9. UNESCO. (2021). AI in education: Guidance for policy-makers

Alignment with NEP – 2020

The course **AI-Enhanced Curriculum Development and Instruction (26ED511)** is designed in alignment with the transformative vision of the National Education Policy 2020, which emphasizes holistic, multidisciplinary, skill-based, and research-driven education. The course reflects key NEP 2020 priorities as shown below:

- a. Integration of technology and AI in education
- b. Competency-based and outcome-based education
- c. Promotion of critical thinking and creativity
- d. Emphasis on digital learning and innovation
- e. Ensuring equity, inclusion, and accessibility

COs and Bloom's Taxonomy Level (BTL) Mapping for 26ED511		
Course Outcomes	On successful completion of the course, the students will be able to	BTL
CO1	Remember & Understand concepts of curriculum and AI	K1 & K 2
CO2	Apply designing AI based academic plans	K 3
CO3	Analyze instructional strategies and tools	K 4
CO4	Evaluate effectiveness of AI tools	K 5
CO5	Create AI enhanced curriculum frameworks	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	2	3	2	3	2	1	2	3	2	3	3	3	2.3
CO2	2	3	2	2	3	2	2	3	2	3	1	2	2	3	2	2.3
CO3	1	3	2	3	3	2	1	3	2	2	3	2	1	3	2	2.2
CO4	2	2	3	1	2	2	2	2	3	3	2	2	2	2	3	2.2
CO5	1	2	2	3	3	3	2	2	2	3	3	3	3	2	2	2.2
Total																2.3

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