

Course Code	Course Name	Credits
26ED015	AI FOR PERSONALIZED LEARNING AND INCLUSIVE EDUCATION	04

Course Objectives

The course aims to,

- ✓ Understand the meaning and importance of personalized learning and inclusive education
- ✓ Use AI tools for personalized instruction
- ✓ Promote inclusive practices using technology
- ✓ Identify AI based tools that support diverse learners, including children with special needs
- ✓ Interpret learning analytics for decision-making

Learning Outcomes

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

- ❖ Explain the concept and importance of personalized learning and inclusive education
- ❖ Demonstrate how AI supports personalized learning
- ❖ Evaluate AI tools used for inclusive education
- ❖ Use analytics insights to design personalized learning pathways
- ❖ Apply learning analytics to support inclusive practices for diverse learning

Unit 1 - Concept of Personalized Learning (12 hours)

Meaning and concept of personalized learning - characteristics and principles - need and importance in modern education - Difference between individualized and personalized learning.

Unit 2 – AI Technologies for Personalized Learning (12 hours)

Machine Learning basics; meaning and definition of Machine Learning, importance of Machine Learning in Education, application of ML in personalized learning - Natural Language Processing (NLP); meaning and definition of Natural Language Processing, Relationship between AI and NLP, Role of NLP in Education - Intelligent Tutoring Systems.

Unit 3 - Concept of Inclusive Education (12 hours)

Meaning and definition of inclusive education - Evolution of inclusive education - Difference between segregation, integration and inclusion - Need and importance of inclusion.

Unit 4 – Designing Inclusive Learning with AI (12 hours)

Universal Design for Learning (UDL) principles - creating inclusive lesson plans using AI tools - differentiated instruction with AI support - classroom strategies for integrating AI technologies.

Unit 5 - AI Tools and Platforms (12 hours)

Adaptive learning platforms for personalized learning; Khan Academy, Byju's - AI enabled Learning Management Systems (LMS) for personalized learning - Learning analytics for inclusive education; identifying at-risk learners, supporting diverse needs.

Reference Books:

1. Holmes, W., Bialik, M., & Fadel, C. – Artificial Intelligence in Education
2. Holmes, Wayne, Bialik, Maya & Fadel, Charles (2019). Artificial Intelligence in Education: Promises and Implications for Teaching and Learning. Center for Curriculum Redesign.
3. Luckin, R. – Machine Learning and Human Intelligence
4. Rose, David H. & Meyer, Anne (2002). Teaching Every Student in the Digital Age
5. Selwyn, N. – Education and Technology: Key Issues and Debates
6. Siemens, G- Learning Analytics
7. Society for Learning Analytics Research (SoLAR)
8. EDUCAUSE Review

Alignment with NEP – 2020

The proposed course **AI for Personalized Learning and Inclusive Education, 26ED015**, is designed in alignment with the transformative vision of the National Education Policy 2020 which emphasizes equity, inclusion, technology integration, and competency based learning. The alignment can be understood as follows:

1. NEP 2020 advocates learner-centered and flexible education. AI enabled learning pathways tailoring content based on learner pace, ability and interests.
2. NEP stresses equity and inclusion for all learners including marginalized and differently abled groups. AI tools support Assistive technologies, multilingual learning platforms and accessibility features.
3. NEP highlights the role of technology through initiatives like digital platforms and e-learning. AI enhances smart classrooms. Learning Management Systems (LMS) and Data-driven teaching
4. NEP focuses on analysis, creativity and problem solving. AI supported learning encourages inquiry based learning, provides instant feedback and insights etc.
5. NEP promotes continuous assessment and progress tracking. AI and learning analytics help monitor student performance identify learning gaps and improve instructional strategies.

COs and Bloom's Taxonomy Level (BTL) Mapping for 26ED015

Course Outcomes	On successful completion of the course, the students will be able to	BTL
CO1	Explain the concept and importance of personalized learning and inclusive education	K1 & K 2
CO2	Apply how AI supports personalized learning	K 3
CO3	Analyse AI tools used for inclusive education	K 4
CO4	Evaluate analytics insights to design personalized learning pathways	K 5
CO5	Create learning analytics to support inclusive practices for diverse learning	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	1	2	1	1	3	2	2	2	1	1	1	1.7
CO2	3	3	2	1	1	1	3	2	2	2	3	1	1	3	2	2.0
CO3	3	3	2	2	2	2	3	2	2	2	3	2	2	3	2	2.3
CO4	3	3	3	1	2	1	3	3	2	3	2	1	2	3	1	2.2
CO5	3	3	3	2	2	3	3	2	3	3	3	2	2	3	2	2.6
Total																2.2

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

