Course Code	Course Name	Credits
26CM015	INTELLIGENT SYSTEMS IN E-COMMERCE	04

Course Objectives

- To introduce the fundamentals of e-commerce and the role of intelligent systems in digital business environments.
- To provide knowledge of data analytics, big data, and machine learning techniques used in e-commerce.
- To understand recommendation systems and personalization strategies for improving customer experience.
- To examine security, ethical issues, and advanced AI applications in e-commerce.
- To develop insights into intelligent customer interaction systems such as chatbots and NLP-based tools.

Learning Outcomes

- Understand the concepts of e-commerce models and intelligent systems in digital marketplaces.
- Apply data analytics and basic machine learning techniques to analyze customer behavior.
- Evaluate and design recommendation systems and personalization strategies.
- Analyze security challenges, ethical issues, and emerging AI applications in e-commerce.
- Develop and assess intelligent customer interaction solutions such as chatbots and sentiment analysis tools.

Unit I - Introduction to Intelligent Systems in E-Commerce (12 Hrs)

Meaning and scope of E-commerce - Evolution of E-commerce technologies - Concept of Intelligent Systems - Role of Artificial Intelligence in E-commerce - Types of E-commerce models (B2B, B2C, C2C, C2B) - Overview of digital marketplaces

Unit II - Data Analytics and Machine Learning in E-Commerce (12 Hrs)

Introduction to Big Data in E-commerce - Data collection: customer behavior, clickstream data - Basics of Machine Learning (supervised & unsupervised learning) (a) Data mining techniques for E-commerce (b) Predictive analytics and customer insights.

Unit III - Recommendation Systems and Personalization (12 Hrs)

Introduction to recommendation systems - Types: collaborative filtering, content-based, hybrid models - Personalization techniques in online retail - Customer segmentation and targeting - Case studies of recommendation engines

Unit IV - Security, Ethics, and Advanced Applications (12 Hrs)

Fraud detection and prevention using AI - Cybersecurity in E-commerce - Ethical issues in intelligent systems (bias, privacy) - Dynamic pricing strategies - Future trends: AI-driven supply chains, automation, AR/VR in shopping.

Unit V - Intelligent Customer Interaction Systems (12 Hrs)

Chatbots and virtual assistants - Natural Language Processing (NLP) in E-commerce - Voice-based commerce -Sentiment analysis and customer feedback systems - Enhancing customer experience through AI.

Reference Books:

1. Kenneth C. Laudon , E-Commerce: Business, Technology, Society"
2. Peter Gentsch , "Artificial Intelligence for E-Commerce"
3. Foster Provost & Tom Fawcett , "Data Science for Business"
4. Oliver Theobald , "Machine Learning for Absolute Beginners

Websites and eLearning Sources:

1. https://www.youtube.com/watch?v=Tobe30SLkU0
2. https://www.youtube.com/watch?v=hhGPiDrUe1c
3. https://www.youtube.com/watch?v=8CPI5_Ivmj4&list=PLQY2H8rRoyvy2MiyUBz5RWZr5MPFkV3qz
4. https://www.youtube.com/watch?v=jq_LZ1RFPfU
5. https://www.youtube.com/watch?v=QIopyylJcrc

COs and Bloom's Taxonomy Mapping – 26CM015		
Course Outcomes	**On successful completion of this course, students will be able to**	**BTL**
CO1	Understand the concepts of e-commerce models and intelligent systems in digital marketplaces.	K1 & K2
CO2	Apply data analytics and basic machine learning techniques to analyze customer behavior.	K4
CO3	Evaluate and design recommendation systems and personalization strategies.	K4
CO4	Analyze security challenges, ethical issues, and emerging AI applications in e-commerce.	K5
CO5	Develop and assess intelligent customer interaction solutions such as chatbots and sentiment analysis tools.	K6

BTL Bloom's Taxonomy Level) - K1 – Remembering, K2 – Understanding, K3- Applying, K4 – Analyse, K5- Evaluate and K6 - Create

Relationship Matrix – 26CM015													
Course Outcomes	**Programme Outcomes (POs)**						**Programme Specific Outcomes (PSOs)**						**Mean Score of Cos**
	PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**	**PSO1**	**PSO2**	**PSO3**	**PSO4**	**PSO5**	**PSO6**	
CO1	2	2	3	3	3	1	3	3	1	2	1	2	2.17
CO2	3	2	2	3	3	2	3	3	2	3	2	2	2.50
CO3	3	3	3	3	3	2	2	3	2	3	2	1	2.50
CO4	2	2	1	3	3	3	3	2	1	3	3	2	2.33
CO5	3	3	3	2	2	2	2	3	3	3	1	2	2.42
												Total	2.38

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