



UNIVERSITY OF CALCUTTA

Notification No.CSR/36/2023

It is notified for information of all concerned that in terms of the provisions of Section 54 of the Calcutta University Act, 1979, (as amended), and, in exercise of her powers under 9(6) of the said Act, the Vice-Chancellor has, by an order dated **01.09.2023** approved the syllabi of the under mentioned optional SEC paper offered by the University to be studied in semester-2 of Four-year U.G. Courses of Studies (Honours & Honours with Research) courses of Studies under CCF, 2022 under this University, as laid down in the accompanying pamphlet.

- 1. Artificial Intelligence (A1) (for Science discipline)**
- 2. Digital Empowerment (for Humanities and Language discipline & B.Mus.)**

The U.G. Board of Studies shall have the option to offer the above in place of the concerned subject based SEC paper at the 2nd semester.

The above shall take effect from the academic session 2023-2024.

SENATE HOUSE

Kolkata-700073

The 8th September, 2023

A handwritten signature in black ink, appearing to read 'D Das 9/2023'.

Prof.(Dr.) Debasis Das

Registrar

Course Title: AI for Everyone

Course Description:

This course aims to introduce the fundamental concepts of artificial intelligence (AI) to individuals from all academic backgrounds. Participants will develop a broad understanding of AI technologies, their implications, and their potential applications in various fields. The course will emphasize practical examples and real-world case studies to facilitate comprehension and inspire innovative thinking.

Course Objectives:

- Understand the basics of artificial intelligence and its subfields.
- Explore real-world applications of AI across different industries.
- Gain insights into the ethical, social, and economic implications of AI.
- Develop an appreciation for the potential of AI to drive innovation and transformation.

Course Outcome:

- Define and explain the fundamental concepts and subfields of AI.
- Identify real-world applications of AI across various industries.
- Analyze the ethical, social, and economic implications of AI.
- Recognize the potential of AI to drive innovation and transformation in different domains.

Unit 1: Introduction to Artificial Intelligence (6 Lectures)

- Definition and scope of AI
- Historical overview and key milestones
- Differentiating AI from human intelligence

Unit 2: AI Subfields and Technologies (6 Lectures)

- Machine learning: Supervised, unsupervised, and reinforcement learning
- Deep learning and neural networks
- Natural language processing (NLP) and computer vision

Unit 3: Applications of AI (8 Lectures)

- AI in healthcare: Diagnosis, treatment, and medical imaging
- AI in finance: Fraud detection, algorithmic trading, and risk assessment
- AI in transportation: Autonomous vehicles and traffic optimization
- AI in customer service and chatbots
- AI in education: Personalized learning and intelligent tutoring systems

Unit 4: Ethical and Social Implications of AI (5 Lectures)

- Bias and fairness in AI systems
- Privacy and data protection concerns
- Impact of AI on employment and the workforce
- AI and social inequality

Unit 5: Other Important Issues

- Ethical guidelines and responsible AI practices
- AI and Innovation
- Emerging trends and future directions in AI
- AI and creativity: Generative models and artistic applications