

Course Design of a 3-credit Value Aided Course (VAC) for one Semester (5th Semester) for all UG students Arts/Science / Commerce/BBA/BCA students

Designing a 3-credit undergraduate course in Artificial Intelligence (AI) for Arts, Science, and Commerce students requires a careful balance of accessibility, relevance, and foundational rigor. The goal is to introduce students from non-technical backgrounds to the concepts, applications, and implications of AI in a way that is engaging, interdisciplinary, and practically useful.

- Course Title: Introduction to Artificial Intelligence: Concepts, Applications, and Ethics
- Course Credits: 3
- Duration: 15 weeks (1 semester)
- Target level: Undergraduate students from Arts, Science, and Commerce streams
- Prerequisites: None (basic digital literacy recommended)
- Course Objectives

By the end of this course, students will be able to:

1. Understand the basic concepts and history of AI
2. Explore real-world applications of AI across disciplines
3. Analyse the ethical, social, and economic implications of AI
4. Gain hands-on experience with simple AI tools and platforms
5. Critically evaluate AI's impact on their field of study

• Course Structure

Module	Title	Topics to be covered	Duration
1	Foundations of AI	What is AI? History, types (narrow vs general), key milestones	2 weeks
2	How AI Works (Without Coding)	Basics of machine learning, neural networks, natural language processing, computer vision (conceptual, visual demos)	1 weeks
3	AI in the Real World	AI in healthcare, finance, marketing, education, arts, journalism, and commerce	2weeks
4	AI Tools for Everyone	Hands-on with tools like ChatGPT, Canva AI, Google Teachable Machine, Runway ML, etc.	2 weeks
5	Ethics, Bias, and Society	Algorithmic bias, surveillance, job displacement, misinformation, AI and creativity	2 weeks
6	AI and Your Discipline	Case studies and projects tailored to Arts, Science, or Commerce	2 weeks
7	Capstone Project & Presentations	Group project: design an AI solution or critique an AI system	2 weeks

Teaching Methods

- Lectures with multimedia and real-world examples
- Interactive demos using no-code AI tools
- Case studies from diverse fields

- Debates and discussions on ethics and policy
- Mini-projects and reflective journals

Assessment Scheme

Component	Weightage
Quizzes (MCQs & Short answers)	10%
Assignments & Journals	10%
Class Participation & Project work	30%
Final Exam (conceptual, application-based)	50%

Tools:

ChatGPT, Google Teachable Machine, Canva AI, Runway ML, Pictory, etc.

Customization by Discipline (illustrative)

- Arts: AI in literature, music, visual arts, creative writing
- Commerce: AI in marketing, customer analytics, fraud detection
- Science: AI in climate modelling, biology, data analysis

Detailed Syllabus

Unit 1: Introduction to Artificial Intelligence

Intelligence and Artificial Intelligence, Intelligent Machines and Smart Systems, Definition and Scope of AI, History and Evolution of AI, AI Problem Solving and Search Techniques, Rule-Based Systems, Natural Language Processing and Computer Vision – introductory concepts.

Unit 2: Machine Learning Fundamentals

Introduction to Machine Learning and Data-Driven Intelligence, Types of Machine Learning: Supervised, Unsupervised and Reinforcement Learning, Concept of Training Data and Labelled Data, Regression and Classification, Clustering and Dimensionality Reduction, Neural Networks – basic idea, Decision Trees, k-NN and Deep Learning (introductory concepts), Model Training and Evaluation (accuracy, precision, recall – concept only), Real-life examples of Machine Learning applications.

Unit 3: AI Applications & Tools (Stream Specific)

Generic AI Applications: AI in education, healthcare, agriculture, governance, business analytics, finance, robotics, media and entertainment.

Hands-on Exposure to AI Tools: ChatGPT, Gemini, Copilot, Claude, Canva AI, Runway ML, Google Teachable Machine, DALL-E, Adobe Firefly and Pictory, Google AI Studio.

A) AI for Arts Stream: AI in literature, language translation, digital humanities, music composition, creative writing, journalism, media analytics and visual arts.

OR

B) AI for Science Stream: AI in climate modelling, healthcare diagnostics, bioinformatics, environmental monitoring, scientific data analysis and research automation.

OR

C) AI for Commerce Stream: AI in marketing, customer analytics, accounting automation, fraud detection, e-commerce, stock prediction and financial services.

Unit 4: Ethical, Social, Economic and Legal Implications of AI

Ethical AI and Responsible AI Practices, Algorithmic Bias and Fairness, Privacy and Surveillance Issues, Misinformation and Deepfakes, Intellectual Property and AI-generated Content, AI and Employment, Human-AI Collaboration, Digital Divide, Security Concerns, Existing Laws and Policies related to AI, Need for AI Governance and Sustainable AI Development

Unit 5: Group Mini Project & Presentation

Students shall identify a real-life case study from their stream and: (a) Design a conceptual AI-based solution, or (b) Critically evaluate an existing AI system/tool. The project should include problem identification, AI application analysis, ethical considerations, report preparation and seminar presentation.

Teaching-Learning Methodology

- Interactive lectures with multimedia demonstrations
- Hands-on activities using no-code AI tools
- Case studies and interdisciplinary discussions
- Group activities, seminars and presentations
- Reflective assignments and mini-projects

Assessment Scheme

Component	Weightage
Quizzes / MCQ Tests	10%
Assignments / Reflective Journals	10%
Class Participation & Project Work	30%
End Semester Examination	50%

Text Books:

1. Saptarsi Goswami, Amit Kumar Das, and Amlan Chakrabarti. AI for Everyone: A Beginner's Handbook for Artificial Intelligence (AI), Pearson.
2. Sridhar Seshadri, Shreeram Iyer. AI for Everyone: A Common Man's Guide to Artificial Intelligence, Embassy Books.

Suggested References

1. Russell, Stuart & Norvig, Peter. Artificial Intelligence: A Modern Approach, 4th Edition, Pearson.
2. Andreas C. Müller & Sarah Guido. Introduction to Machine Learning with Python, O'Reilly.
3. Selected online resources and AI tool documentation.

