Tribhuvan College, Neemrana, Rajasthan

B.Tech (Artificial Intelligence and Machine Learning)
Syllabus

Sr. No.	Heading	Particulars
1	Title of the course	B.Tech (Artificial Intelligence and Machine Learning)
2	Eligibility for admission	As per the GGSIP University Norms
3	Passing percentage	55% in PCM
4	Semesters	I to VIII
5	Level	UG
6	Pattern	04 years & 08 semesters (CBCS)
7	To be implemented from	From Academic year 2026–27 in a progressive manner

B.Tech (Artificial Intelligence & Machine Learning)

Course Overview:

The B.Tech in Artificial Intelligence and Machine Learning (AI-ML) is a four-year undergraduate program that is designed to equip students with the knowledge and skills required to build intelligent systems that learn, adapt, and improve from experience. This program blends core computer science fundamentals with advanced knowledge and hands-on experience in AI and ML techniques, preparing graduates to lead innovation in the digital era.

As AI and ML continue to redefine industries from healthcare, weather forecasting, Goods and supply chain, finance, autonomous vehicles, and smart cities. AI-ML are transforming businesses, society, and daily life by automating tasks, improving decision-making, and driving innovation. This program provides a future-ready curriculum taught through practical projects, research, and internships, which helps students to gain skills to design intelligent systems and solve real-world problems.

Key Highlights:

- **Duration:** 4 Years (8 Semesters)

- **AI & ML Focused Subjects:**

  - Foundations of Artificial Intelligence

  - Machine Learning & Deep Learning

  - Natural Language Processing

  - Computer Vision

  - Reinforcement Learning

  - Neural Networks and Fuzzy Logic

- **Tools & Technologies:** Python, TensorFlow, PyTorch, OpenCV, Keras, R, Scikit-Learn, SQL, Git

- **Capstone Projects & Industry Internships**

Career Opportunities:

Graduates of this program are well-positioned for roles such as:

- Machine Learning Engineer

- AI Research Scientist

- Data Scientist / Data Analyst

- Computer Vision Engineer

- NLP Engineer

- Software Developer – AI Systems

- Robotics Engineer

- AI Product Manager

- AI Prompt Engineer

Why Choose This Program?

- **Industry-Aligned Curriculum:** Co-designed with input from leading AI experts and tech companies.

- **Experienced Faculty:** A mix of academic scholars and industry practitioners.

- **Project-Based Learning:** Real-world projects and challenges throughout the course.

- **Research Opportunities:** Access to AI/ML research labs and innovation centers.

- **Placement Support:** Strong placement cell with partnerships with top tech companies.

Course Structure

We offer a diverse range of courses in computer science and engineering across eight semesters. The descriptions of the courses for the semesters are provided.

Group	Paper Code	Paper
ES	ES-102	*Any one of the following: Programming in 'C'
BS	BS-104/BS-120#	Applied Chemistry / Basic Chemistry#
BS	BS-106	Applied Physics – II
ES	ES-108	*Any one of the following: Electrical Science
BS	BS-110	Environmental Studies
BS	BS-112	Applied Mathematics – II
HS	HS-114	**Group 1 or Group 2 shall be offered: Group 1: Communications Skills OR
H S H S	HS-116 HS-118	Group 2: Indian Constitution*** Human Values and Ethics***
ES	ES-114	Engineering Mechanics
BS	BS-152	Physics-II Lab

		*Any of the following corresponding to the theory paper offered:
ES	ES-154	Programming in 'C' Lab
BS	BS-156	Applied Chemistry
ES	ES-158	Engineering Graphics-II
		*Any of the following corresponding to the theory paper offered:
ES	ES-160	Electrical Science Lab
BS	BS-162	Environmental Studies Lab
ES	ES-164	Workshop Practice