

I.T.S Engineering College, Greater Noida

AIML Lab (Artificial Intelligence & Machine Learning), CoE

Transforming Ideas into Intelligent Solutions through AI & ML

1. Objective of the Centre

The **Artificial Intelligence and Machine Learning (AIML), Centre of Excellence** at ITS Engineering College aims to provide students of Department of CSE and Allied Branches with cutting-edge knowledge, research opportunities, and hands-on skills in Artificial Intelligence, Machine Learning, and Data Science.

The Centre bridges academic learning with real-world applications, preparing students for **industry-driven AI roles, research projects, and global certifications.**

Key Objectives:

- To enable students to develop intelligent systems using ML, DL, and AI tools.
- To promote interdisciplinary research and innovation in AI applications.
- To build strong industry-academia collaborations through joint projects and internships.
- To prepare students for professional certifications and career roles in AI, Data Science, and Automation.

2. Courses and Training Offered

The AIML Centre of Excellence offers a series of structured training programs and certifications aligned with industry needs and global standards.

Course Name	Duration	Level	Key Focus Areas
AI & ML Foundation Program	6–8 Weeks	Beginner	Python for ML, Statistics, Supervised & Unsupervised Learning
Applied Machine Learning with Python	8–10 Weeks	Intermediate	Data Preprocessing, Model Building, Scikit-learn, Model Evaluation
Deep Learning and Neural Networks	10–12 Weeks	Advanced	CNN, RNN, ANN, TensorFlow, Keras
AI in Practice – Capstone Project	4–6 Weeks	Project Phase	Building AI solutions for real-world problems

Course Name	Duration	Level	Key Focus Areas
Workshops / Seminars	Periodic	All Levels	Generative AI, NLP, AI in Healthcare, Ethics in AI

3. Eligibility and Pre-requisites

- **Eligibility:** Open to B.Tech students of CSE, CSE-AIML, CSE-DS branches.
- **Faculty and Research Scholars** interested in AI technologies may also participate.
- **Pre-requisites:**
 - Strong fundamentals in mathematics, probability, and linear algebra.
 - Programming knowledge in Python or R.
 - Interest in data analytics, algorithms, and problem-solving.

4. Course Timelines and Roadmap

The AIML training roadmap is designed to progressively build student competency from fundamentals to advanced AI applications.

Year / Semester	Focus Area	Outcome
2nd Year	Introduction to AI & Python Programming	Understand AI basics, logic building
3rd Year	Machine Learning Foundations	Build and evaluate ML models
3rd Year	Deep Learning & Neural Networks	Design, train, and optimize DL architectures
4th Year	AI Projects, Research & Certification	Apply AI for real-world innovation and placement readiness

5. Certifications Offered

Students will have opportunities to pursue **internationally recognized certifications** to validate their skills in AI and ML domains.

Certification	Issuing Body	Tentative Cost (approx.)	Recognition
Machine Learning (Andrew Ng)	Stanford University (Coursera)	₹3,000–₹6,000	Global Benchmark
Deep Learning Specialization	DeepLearning.AI (Coursera)	₹4,000–₹8,000	Global
Professional ML Engineer	Google Cloud	₹10,000–₹12,000	Global, Industry Standard
Azure AI Engineer Associate	Microsoft	₹9,000–₹11,000	Global
AWS Certified Machine Learning – Specialty	Amazon Web Services (AWS)	₹10,000–₹12,000	Global
IBM Machine Learning Professional Certificate	IBM + Coursera	₹4,000–₹9,000	Global, Professional
AI & Machine Learning Master's Program	Simplilearn (with Purdue University / IBM)	₹45,000–₹70,000	Professional
PG Diploma in AIML	IIIT Bangalore (via upGrad)	₹1.5–₹2.5 lakh	Academic + Industry
Professional Certificate in AI & ML	MIT xPro (edX)	₹1.8–₹2.2 lakh	Global Academic
Data Science: Machine Learning	Harvard University (edX)	₹7,000–₹12,000	Global
AI & ML Certification Course	NPTEL / IIT Madras / IIT Hyderabad	Free–₹2,000	Govt. Recognized
FutureSkills Prime – AI Foundation / Practitioner	NASSCOM & MeitY (Govt. of India)	₹2,000–₹5,000	Government & Industry
AI & Deep Learning Specialization	Great Learning	₹40,000–₹60,000	Industry-Academic
AI for Everyone / Generative AI with LLMs	DeepLearning.AI (Coursera)	₹3,000–₹6,000	Global
Fundamentals of Deep Learning for Computer Vision / NLP	NVIDIA Deep Learning Institute (DLI)	₹5,000–₹10,000	Highly Recognized
Artificial Intelligence Program	Edureka	₹499–₹3,000	Popular

Certification	Issuing Body	Tentative Cost (approx.)	Recognition
Machine Learning A-Z™: Hands-On Python & R	Udemy	₹499–₹2,999	Popular
AI & ML Job-Oriented Course	CDAC (Centre for Development of Advanced Computing)	₹20,000–₹40,000	National Govt.
AI Engineer Certification	FutureSkills Prime + NASSCOM	₹3,000–₹6,000	Govt. & Industry
Practical Deep Learning for Coders	fast.ai	Free	Research-Oriented

These certifications enhance employability and provide students a global advantage in AI-based career roles.

6. Lab Activities and Guidelines

Lab Activities:

- Practical implementation of ML and AI algorithms using Python, TensorFlow, and PyTorch.
- Mini and Major projects on domains like healthcare, finance, and image recognition.
- Participation in national/international AI hackathons and Kaggle competitions.
- Research paper writing and publication in AI/ML conferences or journals.

Guidelines:

- Each student must maintain a lab record for all experiments and models built.
- Access to GPU-enabled systems must be used responsibly for project training.
- Cloud-based tools (Google Colab, AWS, Azure) must be accessed only via authorized college accounts.
- Students should adhere to AI ethics and avoid biased or harmful model applications.

Top Employers: Microsoft, Google, Tata Consultancy Services (TCS), Infosys Technologies, Wipro Limited, Cognizant Technology Solutions, Capgemini, Accenture, IBM, Tech Mahindra, HCL Technologies, DXC Technology, Mindtree

Contact Information

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