



M.Tech.

Artificial Intelligence & Machine Learning For Working Professionals



BITS Pilani
Pilani | Dubai | Goa | Hyderabad | Mumbai
**WORK INTEGRATED
LEARNING PROGRAMMES**

HCLTech



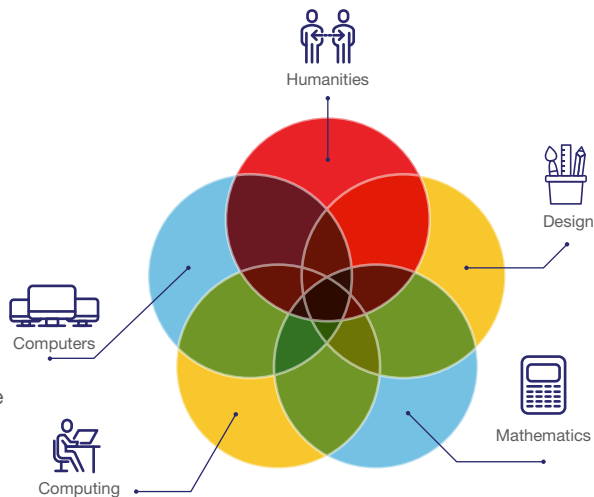
PROGRAM INTRODUCTION

With a surge of job opportunities in the fields of Artificial intelligence and Machine Learning, the world is indeed standing on the threshold of massive transformation.

According to the World Economic Forum's Future of Jobs Report, 85 million jobs will be replaced by machines with AI by 2025. While that might make you uneasy, the same report states that 97 million new jobs will be created by 2025 due to AI. Are you prepared?

Prepare for a career with infinite possibilities in AI and ML with India's most comprehensive and world-class M.Tech. Artificial Intelligence and Machine Learning programme without taking any career break.

This four-semester programme covers a wide variety of skills and knowledge areas, and enables IT professionals and Software developers to build a skill set that enables career elevation in some of the most sought-after job roles such as ML Engineers and AI Scientists, etc.



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- libraries for data processing, machine learning, OpenCV for computer vision, NLTK for NLP etc.



M.Tech. Artificial Intelligence & Machine Learning



PROGRAMME OBJECTIVES

- ▶ Abundance of user generated data, easy access to compute and storage in cloud, open-source libraries and algorithmic advancement have led to deployment of artificial intelligence and machine learning techniques across the industries.
- ▶ This in turn has fuelled significant job opportunities in the IT products and services sector in India and across the globe.
- ▶ This program is geared towards the professional development of employees who are working in the area of IT products and services industry or who wish to make a career in the applications of AI and ML techniques in traditional industries; and also address the needs of professionals who work in or want to make a career in online commerce or other online businesses etc.



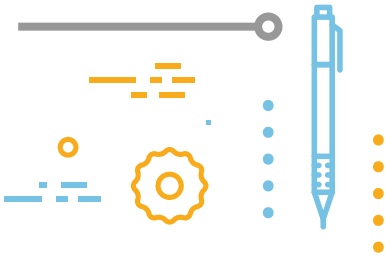
STUDENT LEARNING OUTCOMES

UPON PROGRAMME COMPLETION, LEARNERS WILL BE ABLE TO:

- ▶ Demonstrate conceptual understanding and hands on knowledge of traditional and contemporary AI and machine learning techniques, including deep learning, and reinforcement learning.
- ▶ Demonstrate conceptual understanding and hands on knowledge of AI application areas such as natural language processing, computer vision, robotics or cyber security
- ▶ Understand the system and software engineering requirements for implementing machine learning systems on large datasets and in resource constrained environments.
- ▶ Understand the underlying ethical issues in applying AI and machine learning

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PROGRAMME CURRICULUM

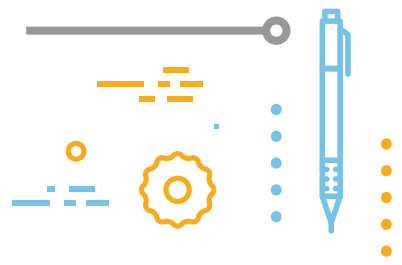


Participants need to take at least 12 courses towards coursework, and complete one Project/ Dissertation. The coursework requirement for the programme would consist of a set of core courses and electives. Core courses are compulsory for all participants, while electives can be chosen based on individual learning preferences.

First Semester	Second Semester
Mathematical Foundations for Machine Learning	Deep Neural Networks
Introduction to Statistical Methods	Deep Reinforcement Learning
Artificial and Computational Intelligence	Elective 1
Machine Learning	Elective 2
Third Semester	Fourth Semester
Elective 3	Dissertation
Elective 4	
Elective 5	
Elective 6	
Pool of Electives for : Deep Learning Specialization	
AI and ML for Robotics	Introduction to Parallel and Distributed Programming
AI and ML Techniques for Cyber Security	MLOps
Advanced Data Mining	Metaheuristics for Optimization
API-driven Cloud Native Solutions	Multimodal AI
Automated Reasoning	Multimodal Information Retrieval
Architecting AI Systems	Probabilistic Graphical Models
Agentic AI Systems	Quantum Machine Learning
Design of Algorithms	Software Engineering for Machine Learning
Data Management for Machine Learning	

Note- At least 3 courses are required including the course marked as#

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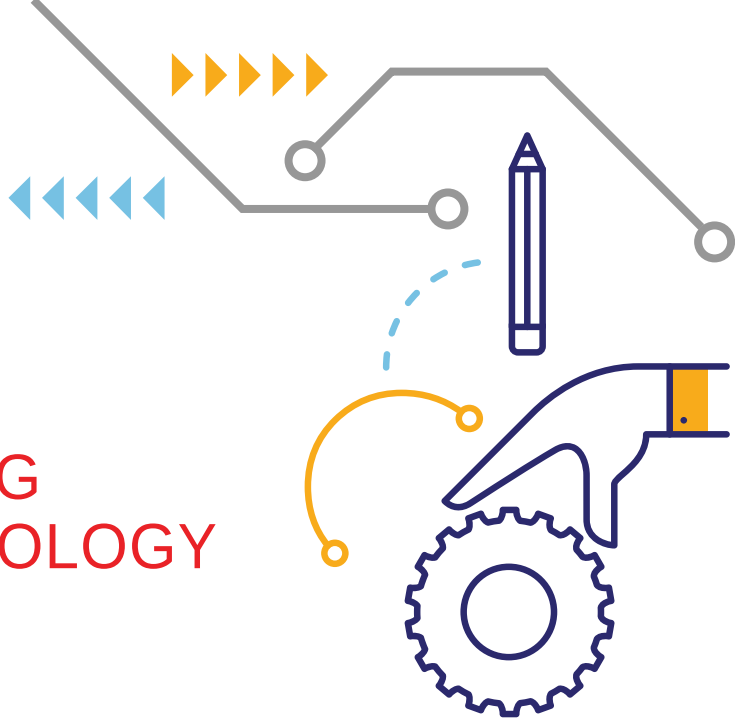
Pool of Electives for : NLP Specialization	General Pool of Electives
Advanced Reasoning and Planning	Computational Learning Theory
Conversational AI	Distributed Machine Learning
Information Retrieval	Fair, Interpretable, Trustworthy Machine Learning
Large Language Models for Generative AI	Graph Neural Networks
Natural Language Processing#	ML System Optimization
NLP Applications	Machine Learning on the Edge
Speech Processing	Unsupervised Deep Learning#
Social Media Analytics	
<i>Note- At least 3 courses are required including the course marked as#</i>	
Pool of Electives for : Audio and Vision	
Audio Analysis#	Contemporary Computer Graphics
Computer Vision#	3D Computer Vision
Computational Photography	Video Analysis
Computational Imaging	



Note- At least 3 courses are required including the course marked as#

Note: Choice of Electives is made available to enrolled students at the beginning of each semester. Students' choice will be taken as one of the factors while deciding on the Electives offered. However, Electives finally offered will be at the discretion of the Institute.

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LEARNING METHODOLOGY



Attend online lectures over weekends

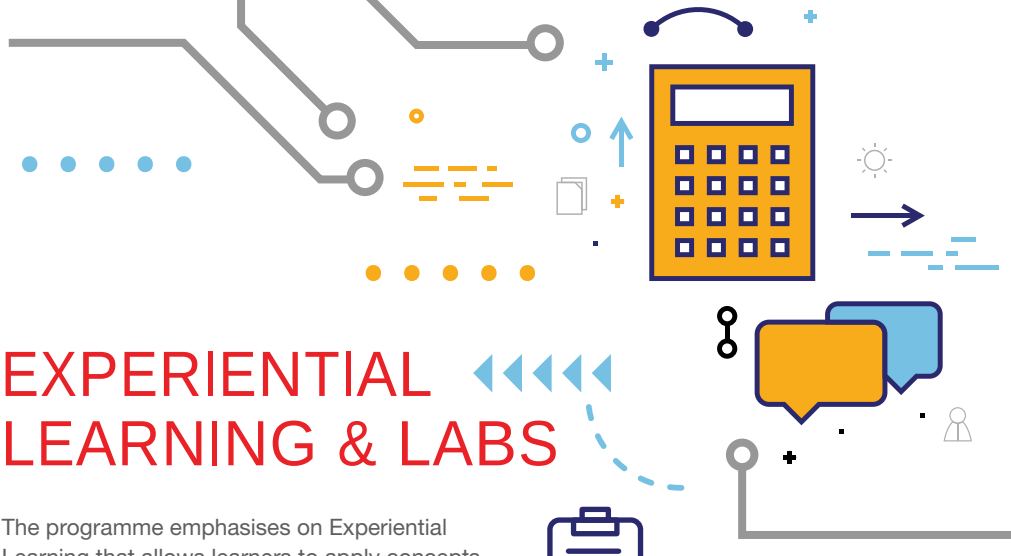
- Lectures are conducted live via online classes. These lectures can be attended via the internet using a computer from any location. These online classrooms offer similar levels of interactivity as regular classrooms at the BITS Pilani campus.
- The class schedule is announced within 1 week of completion of the admission process.
- The online lectures are conducted usually over weekends for a total of 7-8 hours per week. If you miss a lecture, you can also access the recorded lecture on the internet.



DIGITAL LEARNING

- Learners can access engaging learning material at their own pace which lecture videos, student notes, curated content etc. for select courses, through a learning management platform that is engaging and mobile-friendly.

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EXPERIENTIAL LEARNING & LABS

The programme emphasises on Experiential Learning that allows learners to apply concepts learnt in the classroom in simulated, and real work situations. This is achieved through:

Simulation Tools, Platforms & Environments:
Some or all of the following would be utilised across the programme.

Tensorflow for Deep Learning and various Python libraries for data processing, machine learning, OpenCV for computer vision, NLTK for NLP etc.



PROJECT WORK

During the final semester participants carryout a semester-long intensive project work applying the various concepts learnt throughout the program guided by the organisation mentor and supervisor. Participants are provided access to virtual labs where applicable, and faculty expertise to support the project work.



EXAMINATIONS & CONTINUOUS ASSESSMENT

The learners' performance is assessed continuously throughout the semester using various tools such as quiz, assignments, mid-semester and comprehensive exams. The assessment results are shared with the learners to improve their performance.

Each course will entail a minimum of 1 Assignment / Quiz, a mid-semester exam and a final comprehensive exam. Your semester calendar will clearly indicate the dates of the mid-semester and comprehensive exams. Typically, a mid-semester or comprehensive examination for a course is of 2-3 hours duration. The examinations are typically conducted over a weekend, i.e. Saturday and Sunday. These exams will be conducted either at the learners' office premises, or at another suitable location. Details regarding the exam location will be communicated at the beginning of the semester.

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ELIGIBILITY CRITERIA

- ▶ Employed professionals holding B.E./B.Tech. or equivalent with at least 60% aggregate marks and minimum one-year relevant work experience after the completion of the degree.

OR

- ▶ Employed professionals holding MCA/M.Sc. or equivalent with at least 60% aggregate marks with university level mathematics / statistics as mandatory subjects and minimum one-year relevant work experience after the completion of the degree.
- ▶ Applicants must have a minimum of One Year of work experience within HCLTech with a minimum annual rating of "Good & above" in the last appraisal cycle.
- ▶ Working knowledge of Computing and programming is required.

Note: It is strongly advised to refer and check HCL's policy details and other Eligibility Criteria of the programme before applying, as all fees are non-refundable. The above are only the minimum criteria to apply.

Note: The final decision to offer admission to an applicant rests with BITS Pilani which will be made based on an overall review of your application information.

FEE STRUCTURE

The following fees schedule is applicable for candidates seeking new admission during the academic year 2026-2027.

Application Fees
(one time) :INR 1,500

Admission Fees
(one time) :INR 18,500

Semester Fees
(per semester) :INR 78,600



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HOW TO APPLY

- ▶ [Click here](#) to visit the Online Application Center. Create your login at the Online Application Center by entering your official HCL Email ID only and create a password of your choice. Once your login has been created, you can anytime access the Online Application Center using your official email ID and password.
- ▶ Begin by clicking on Step 1 - 'Fill/ Edit and Submit Application Form'. This will enable you to select the programme of your choice. After you have chosen your programme, you will be asked to fill your details in an online form. You must fill all details and press 'Submit' button given at the bottom of the form.
- ▶ Now, click on 'Pay Application Fee' to pay INR 1,500/- using Netbanking/ Debit Card/ Credit Card
- ▶ Finally, click on 'Upload & Submit All Required Documents'. This will allow you to upload one-by-one all the mandatory supporting documents such academic certificates and transcripts, photograph, etc. and complete the application process. Acceptable file formats for uploading these documents are .DOC, .DOCX, .PDF, .ZIP and .JPEG
- ▶ Upon receipt of your Application Form and all other enclosures, the Admissions Cell will scrutinise them for completeness, accuracy and eligibility.
- ▶ Admission Cell will intimate selected candidates by email within two weeks of submission of application with all supporting documents. The selection status can also be checked by logging in to the Online Application Centre.

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DISCLAIMER

Ever since it was declared as a Deemed to be University in 1964, BITS Pilani has been offering higher education programmes in science and technology, and has earned an enviable reputation for its innovations in this sphere. The Work Integrated Learning Programmes (WILP) of BITS Pilani constitutes a unique set of educational offerings for working professionals. These programmes, which BITS began to offer in 1979, have, over the years, evolved along the lines envisaged in the National Policy on Education, 1986.

The WILP are rigorous higher education programmes in technology areas, designed keeping the evolving needs of industry in view, and meant for working professionals in their respective domains. The very intent is to deliver the education at the workplace, in order that the greatest degree

of work integration of the education is achieved, and thus the WILP are very distinct in philosophy and pedagogy from open, distance learning programmes. Though it is incorrect and improper, at times the WILP are compared to ODL programmes. Accordingly, it has been our constant endeavor to engage with the regulator, and provide all necessary information about these programmes.

The WILP have been well received, and accepted by industry, because of the high quality of the programmes in terms of the curriculum and the instruction, and also because of the high degree of work integration, which results not only in up gradation of knowledge, but also in up skilling, and productivity increase.

HCL_10/09/2026