

# (Suggested / Indicative Model Scheme)



## MAULANA AZAD NATIONAL INSTITUTE OF TECHNOLOGY, BHOPAL – 462003

### Centre of Artificial Intelligence

PROPOSED SCHEME M.TECH (Artificial Intelligence) (PART TIME) (W.E.F JULY 2024)

### **M. Tech. in Artificial Intelligence (PART TIME)**

#### **First Semester:**

Subject Code	Subject	Periods Per Week			Total Credits
		L	T	P	
PAI24511	Statistical Methods	3	-	-	3
PAI24512	Machine Learning	3	-	-	3
	Departmental Elective-1	3	-	-	3
PAI24513	Lab-I (Machine Learning Lab)	-		2	1
PAI24514	Seminar-I			2	1
PAI24515	Minor Project-I (Self Learning)			-	2
	Communication Skills/ Research Methodology (From NPTEL)	-	-	-	-
Total Hours:13 Total Credits:13		Total Semester Credits			13

#### **Second Semester:**

Subject Code	Subject	Periods Per Week			Total Credits
		L	T	P	
PAI24521	Deep Learning	3	-	-	3
PAI24522	Computer Vision	3	-	-	3
	Departmental Elective-2	3	-	-	3
PAI24523	Lab-II (Deep Learning Lab)			2	1
PAI24524	Seminar-II	-		2	1
PAI24525	Minor Project-II (Self Learning)	-		-	2
	Communication Skills/ Research Methodology(From NPTEL)	-	-	-	-
Total Hours:13 Total Credits:13		Total Semester Credits			13

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#### Third Semester:

Subject Code	Subject	Periods Per Week			Total Credits
		L	T	P	
PAI24531	Soft Computing	3	-	-	3
	Departmental Elective-3	3	-	-	3
PAI24532	Lab–III(Based on Core and Elective)	-	-	2	1
PAI24533	Pre-Dissertation-I	-	-	12	6
TotalHours:20 TotalCredits:13		Total Semester Credits			13

#### Fourth Semester:

Subject Code	Subject	Periods Per Week			Total Credits
		L	T	P	
	Departmental Elective-4	3	-	-	3
	Elective-5 (Open Elective)	3	-	-	3
PAI24541	Lab–IV(Based on core and Elective)	-	-	2	1
PAI24542	Pre-Dissertation-II	-	-	12	6
TotalHours: 20 TotalCredits:13		Total Semester Credits			13

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#### Fifth Semester:

Subject Code	Subject	Scheme of studies periods per week			Total Credits
		L	T	P	
PAI24611	Dissertation Phase-I	-	-	28	14
Total Hours: 28 Total Credits:14		Total Semester Credits			14

#### Sixth Semester:

Subject Code	Subject	Periods Per Week			Total Credits
		L	T	P	
PAI24612	Dissertation Phase-II	-	-	28	14
Total Hours:28 Total Credits:14		Total Semester Credits			14
Total Credits I,II,III, IV, V, VI Semester					80

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List of Department Elective		List of Open Elective	
Subject Code	Subject	Subject Code	Subject
PAI24551	Wireless Networking	ARP24581	Introduction to Urban Planning
PAI24552	Advance Data Structures	BSE24581	Bioprocess Engineering
PAI24553	Cryptography	BSE24582	Biophysics Tool and Engineering
PAI24554	Quantum Computing	CHE24581	Analytical Techniques
PAI24555	Computer and Network Security	CHE24582	Green Technology and Processes
PAI24556	Game Theory	CE24581	Solid Waste Management
PAI24557	Web Search & Information Retrieval	CE24582	Basic Concept of GIS
PAI24558	Reinforcement Learning	CE24583	Road Safety
PAI24559	Knowledge base systems	PHY24581	Nanotechnology and Nanoscience
PAI24560	Scalable system for data science	EE24581	Electric Machines and Applications
PAI24561	Expert Systems	EE24582	Control and Instrumentation
PAI24562	Graph Theory and Network algorithms	ECE24581	Introduction to Fuzzy Logic
PAI24572	Parallel Algorithms	ECE24582	Neural Networks and Applications
PAI24573	Privacy & Database Security	EC24581	Energy Resource Technologies
PAI24574	Stochastic Processes and Queuing Theory	HUM24581	Intellectual Property Rights for Engineers
PAI24575	High Performance Computing	HUM24582	Applied Psychology: Human Centered Design and Engineering
PAI24576	Advanced Machine Learning	MTH24581	Advanced Operations Research
PAI24577	Internet of Things (IoT)	MTH24582	Computing Technologies
PAI24578	Artificial & Evolutionary Algorithms	ME24581	Value Engineering
PAI24579	Natural Language Processing	ME24582	Design thinking
PAI24580	Generative AI	ME24583	Mechatronics and NDT Engineering

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PAI24581	Robotics and Planning algorithms	MME24581	Advanced Instrumentation Methods for Material Analysis
PAI24582	Brain Computer Interface	MME24582	Smart Materials and Their Applications
PAI24572	Parallel Algorithms	MBA24581	Engineering Startup Management