

#### माधव प्रौद्योगिकी एवं विज्ञान संस्थान, ग्वालियर (म.प्र.), भारत MADHAY INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR (M.P.), INDIA

Deemed University (Declared under Distinct Category by Ministry of Education, Government of India)
NAAC ACCREDITED WITH A++ GRADE



D:M- 520 30/12/2024

## Centre for Artificial Intelligence

#### Scheme of Evaluation

B. Tech. VIII Semester (Information Technology (Artificial Intelligence and Robotics))

(for batch admitted in academic session 2021 - 22) Contact Maximum Marks Allotted Category Subject Name Subject Hours per No. Code Code MOOCs Practical Slot Theory Slot week T P Continuous Assign Exa Mode of Mode End Term Continuous Total Total Teaching Evaluation ment m Evaluation Evaluation End Marks Credits Exam Mid Lab work & Skill Proficiency Quiz Fnd Sem. Sem. Sessional Based Exam. in subject Sem. Assignm Exam. ent Mini course Project Departmental 3 MCO Online 25 75 100 DE 1. DE Elective\* (DE-5) Open Category\* 3 Online MCO 25 75 100 OC OC (OC-3) Internship/ Research Project 9 Offline SO 18 250 150 400 240801 DLC Innovation & Start-up\*\*\* Professional SO 2 50 Interactive 50 240802 Development" 300 150 150 650 Total Permitted to opt for maximum two additional courses for the award of Honours or Minor specialization Additional Course for Honours or minor Specialization

\*All of these courses will run through SWAYAM/ NPTEL/ MOOC with credit transfer.

\*Evaluation will be based on participation/laurels brought by the students to the institution in national/state level technical and other events during the complete tenure of the UG programme (participation in professional chapter activities, club activities, cultural events, sports, personality development activities, collaborative events, MOOCs, technical events, institute/department committees, etc.)

MCO: Multiple Choice Question

AO: Assignment + Oral PP: Pen Paper SO: Submission + Oral

	Mode of	Teaching							
The	orv	Lab	PDC		Theory		Lab	Total Credits	
Online	Blended	Offline	Interactive	nteractive PP		MCQ	SO .		
ogy 6	-	9	2	-	-	6	11	17	
35.29	-	52.95	11.76			35.29	64.71	Credits %	

Faculty of Engineering & Technology MITS-DU



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### Centre for Artificial Intelligence

## B. Tech. VIII Semester (Information Technology (Artificial Intelligence and Robotics))

		DE -5*
S. No.	Subject Code	Subject Name
1	240831	Introduction to Large Language Models (LLMs) - 12 weeks
2	240832	Wheeled Mobile Robots- 8 weeks
3	240833	Collaborative Robots (COBOTS): Theory and Practice- 8 weeks

	OC-3*						
S. No.	Subject Code	Subject Name					
1	OC-3	Design and Engineering of Computer Systems - 8 weeks					
2	OC-3	Social Networks - 12 weeks					
3	OC-3	Fuzzy Logic and Neural Networks - 8 weeks					

# List of courses to be opted for Honours in VIII Semester

	Honours* (to be opted by students of F		nt)				
Course Code	Course Name						
	Track 1: Information Security		Track 2: Internet of Things				
H24082501	Systems and Usable Security (4 Weeks)	H24082504	Edge Computing (8 Weeks)				
H24082502	Quantum algorithm and Cryptography (12 Weeks)	H24082505	Wireless Ad Hoc and Sensor Networks (8 Weeks)				
H24082503	Wireless Ad Hoc and Sensor Networks (8 Weeks)	H24052503	Introduction to Internet of Things (12 weeks)				
H24062501	Secure Computation: Part I (12 Weeks)	H24062503	Sensors and actuators (12 weeks)				
H24062502	Information Security- 5 - Secure Systems Engineering (8 Weeks)	H24062504	Microprocessors and Microcontrollers (12 weeks)				
	Track 3: High Performa	nce Computing					
H24082506	High Performance Scientific Computing (12 Weeks)						
H24082507	Affective Computing (12 Weeks)		ű .				
H24082508	Edge Computing (8 Weeks)						
H24062505	Parallel Computer Architecture (12 Weeks)						
H24062506	GPU Architectures and Programming (12 Weeks)						

\* Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

Note: In each semester (starting from V to VIII semester), it is required to opt for new subjects towards Honours Degree/ Minor Specialization.

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### Centre for Artificial Intelligence

### **Scheme of Evaluation**

B. Tech. VIII Semester (Artificial Intelligence (AI) and Data Science)

S. No.	Subject Code	Category Code	Subject Name		Maximum Marks Allotted  Theory Slot Practical Slot MOOCs							-	Ho	ontac	er				
				End Term Evaluation		Continuous Evaluation		End	The control of the co		Assign		Total Marks	L	week T	P	Total Credits	Mode of Teaching	Mode of Exam
				End Sem. Exam.	<sup>5</sup> Proficiency in subject /course	Mid Sem. Exam	Quiz/ Assign ment	Sem. Exam.	Lab work & Sessional	Skill Based Mini Project									
1.	DE	DE	Departmental Elective* (DE-5)	2	2.00	*	æ	-	-	-	25	75	100	3	-	-	3	Online	MCC
2.	OC	OC	Open Category* (OC-3)	-			-	-	-	-	25	75	100	3	-	-	3	Online	MCÇ
3.	270801	DLC	Internship/ Research Project/ Innovation & Start-up***	-	-		<u>.</u>	250	150		-	-	400	•	-	18	9	Offline	so
4.	270802	-	Professional Development*	-	5)	-	-	50	-	2	( <b>-</b>	-	50	-	-	4	2	Interactiv e	SO
		Total		-	-	-	2	300	150 two additio	-	50	150	650	6	-	22	17	lization	-

<sup>\*</sup>All of these courses will run through SWAYAM/ NPTEL/ MOOC with credit transfer.

35.29

PP: Pen Paper SO: Submission + Oral AO: Assignment + Oral MCQ: Multiple Choice Question Mode of Examination Mode of Teaching Lab **Total Credits** Theory PDC Theory Lab MCO SO AO PP Offline Interactive Online Blended 17 11 6 9 6

11.76

Faculty of Engineering & Technology

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Credits %

12

<sup>\*</sup>Evaluation will be based on participation/laurels brought by the students to the institution in national/state level technical and other events during the complete tenure of the UG programme (participation in professional chapter activities, club activities, cultural events, sports, personality development activities, collaborative events, MOOCs, technical events, institute/department committees, etc.)



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## Centre for Artificial Intelligence

# B. Tech, VIII Semester (Artificial Intelligence (AI) and Data Science)

DE -5*							
S. No.	Subject Code	Subject Name					
1	270831	Introduction to Large Language Models (LLMs) - 12 weeks					
2	270832	Essentials of Data Science with R Software-1: Probability and Statistical Inference- 12 weeks					
3	270833	User-centric Computing For Human-Computer Interaction - 8 weeks					

	OC-3*							
S. No.	Subject Code	Subject Name						
1	OC-3	Design and Engineering of Computer Systems - 8 weeks						
2	OC-3	Social Networks - 12 weeks						
3	OC-3	Fuzzy Logic and Neural Networks - 8 weeks						

# List of courses to be opted for Honours in VIII Semester

	Honours* (to be opted by students of P		)				
Course Code	Code Course Name Course Code Course						
	Track 1: Information Security		Track 2: Internet of Things				
H27082501	Systems and Usable Security (4 Weeks)	H27082504	Edge Computing (8 Weeks)				
H27082502	Quantum algorithm and Cryptography (12 Weeks)	H27082505	Wireless Ad Hoc and Sensor Networks (8 Weeks)				
H27082503	Wireless Ad Hoc and Sensor Networks (8 Weeks)	H27052503	Introduction to Internet of Things (12 weeks)				
H27062501	Secure Computation: Part I (12 Weeks)	H27062503	Sensors and actuators (12 weeks)				
H27062502	Information Security- 5 - Secure Systems Engineering (8 Weeks)	H27062504	Microprocessors and Microcontrollers (12 weeks)				
	Track 3: High Performan	ice Computing	The second of the world				
H27082506	High Performance Scientific Computing (12 Weeks)						
H27082507	Affective Computing (12 Weeks)						
H27082508	Edge Computing (8 Weeks)		.30				
H27062505	Parallel Computer Architecture (12 Weeks)						
H27062506	GPU Architectures and Programming (12 Weeks)						

\* Course run through SWAYAM/NPTEL/ MOOC Learning Based Platform

Note: In each semester (starting from V to VIII semester), it is required to opt for new subjects towards Honours Degree/ Minor Specialization.



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#### Scheme of Evaluation

B. Tech. VIII Semester (Artificial Intelligence (AI) and Machine Learning)

S. No.	Subject Code		Subject Name		Maximum Marks Allotted										onta				
10.	. Code	Code			Theory	Slot		1	Practical Slo	ot	МО	OCs		Hours per week					
				1000	l Term luation	100000000000000000000000000000000000000	tinuous uation	End	Contin Evalua		Assign ment	Exa m	Total Marks	L	Т	P	Total Credits	Mode of Teaching	Mode of
		ō		End Sem. Exam.	<sup>5</sup> Proficiency in subject /course	Mid Sem. Exam	Quiz/ Assign ment	Sem. Exam.	Lab work & Sessional	Skill Based Mini Project			Vallag				Creuns		Exam
1.	DE	DE	Departmental Elective* (DE-5)	-	-		-	-	-	-	25	75	100	3		-	3	Online	МСС
2.	OC	OC	Open Category* (OC-3)	( <del>-</del> 8	-		-	-	-	-	25	75	100	3	-	-	3	Online	MCQ
3.	280801	DLC	Internship/ Research Project/ Innovation & Start-up***	æ	*	*	-	250	150	-			400		-	18	9	Offline	SO
4.	280802	-	Professional Development*	-	-		2	50	-	-	-	-	50	-	-	4	2	Interactiv e	SO
		Total		-	1-	*	-	300	150	2	50	150	650	6	-	22	17	-	-

<sup>\*</sup>All of these courses will run through SWAYAM/ NPTEL/ MOOC with credit transfer.

MCQ: Multiple Choice Question AO: Assignment + Oral PP: Pen Paper SO: Submission + Oral

Faculty of Engineering & Technology

MITS-DU

Mode of Teaching Mode of Examination Theory Lab PDC Theory Lab **Total Credits** Online Blended Offline Interactive PP AO MCQ SO 6 11 17 35.29 52.95 11.76 35.29 64.71 Credits %

<sup>&</sup>quot;Evaluation will be based on participation/laurels brought by the students to the institution in national/state level technical and other events during the complete tenure of the UG programme (participation in professional chapter activities, club activities, cultural events, sports, personality development activities, collaborative events, MOOCs, technical events, institute/department committees, etc.)



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# B. Tech. VIII Semester (Artificial Intelligence (AI) and Machine Learning)

		DE -5*
S. No.	Subject Code	Subject Name
1	280831	Introduction to Large Language Models (LLMs) - 12 weeks
2	280832	Deep Learning for Natural Language Processing - 12 weeks
3	280833	User-centric Computing For Human-Computer Interaction - 8 weeks
4	280834	Fuzzy Logic and Neural Networks- 8 weeks

OC-3*						
S. No.	Subject Code	Subject Name				
1	OC-3	Design and Engineering of Computer Systems - 8 weeks				
2	OC-3	Social Networks - 12 weeks				
3	OC-3	Fuzzy Logic and Neural Networks - 8 weeks				
-	-	-				

# List of courses to be opted for Honours in VIII Semester

	Honours* (to be opted by students of Par	ent Department)	
Carres Codo	Course Name	Course Code	Course Name
Course Code	Track 1: Information Security		Track 2: Internet of Things
		H28082504	Edge Computing (8 Weeks)
H28082501	Systems and Usable Security (4 Weeks)	H28082505	Wireless Ad Hoc and Sensor Networks (8 Weeks)
H28082502	Quantum algorithm and Cryptography (12 Weeks)	H28052503	Introduction to Internet of Things (12 weeks)
H28082503	Wireless Ad Hoc and Sensor Networks (8 Weeks)	H28062503	Sensors and actuators (12 weeks)
H28062501	Secure Computation: Part I (12 Weeks)		Microprocessors and Microcontrollers (12 weeks)
H28062502	Information Security- 5 - Secure Systems Engineering (8 Weeks)	H28062504	Microprocessors and interoconduction (12
	Track 3: High Performanc	e Computing	i e e e e e e e e e e e e e e e e e e e
H28082506	High Performance Scientific Computing (12 Weeks)		
H28082507	Affective Computing (12 Weeks)		
H28082508	Edge Computing (8 Weeks)		
H28062505	Parallel Computer Architecture (12 Weeks)		
H28062506	GPU Architectures and Programming (12 Weeks)		

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