

MADHAV INSTITUTE OF TECHNOLOGY & SCIENCE, GWALIOR

(A Govt. Aided UGC Autonomous & NAAC Accredited Institute Affiliated to RGPV, Bhopal)

Department of Information Technology

Scheme of Evaluation

B. Tech. in Information Technology (Artificial Intelligence and Robotics)

VII Semester

(for batch admitted in academic session 2020 – 21)

S. No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted									Total Marks	Contact Hours per week			Total Credits	Mode of Teaching	Mode of Exam.
				Theory Slot				Practical Slot			MOOCs			L	T	P			
				End Term Evaluation		Continuous Evaluation		End Sem. Exam.	Continuous Evaluation		Assignment	Exam							
				End Sem. Exam.	Proficiency in subject /course	Mid Sem. Exam.	Quiz/ Assignment		Lab work & Sessional	Skill Based Mini Project									
1.	DE	DE	Departmental Elective (DE-2)	50	10	20	20	-	-	-	-	-	100	3	-	-	3	Blended	PP
2.	DE	DE	Departmental Elective* (DE-3)	-	-	-	-	-	-	-	25	75	100	3	-	-	3	Blended	MCQ
3.	DE	DE	Departmental Elective* (DE-4)	-	-	-	-	-	-	-	25	75	100	3	-	-	3	Blended	MCQ
4.	OC	OC	Open Category (OC-2)	50	10	20	20	-	-	-	-	-	100	3	-	-	3	Blended	PP
5.	240701	DLC	Departmental Lab	-	-	-	-	60	20	20	-	-	100	-	-	4	2	Offline	SO
6.	240702	DLC	Creative Problem Solving (Evaluation)	-	-	-	-	25	25	-	-	-	50	-	-	2	1	Offline	SO
7.	240703	DLC	Summer Internship Project-III (04 weeks) (Evaluation)	-	-	-	-	60	-	-	-	-	60	-	-	4	2	Interactive	SO
Total				100	20	40	40	145	45	20	50	150	610	12	-	10	17		
8.	1000008	MAC	Universal Human Values & Professional Ethics(UHVPE)	50	10	20	20	-	-	-	-	-	100	2	-	-	GRADE	Online	MCQ
Additional Course for Honours or minor Specialization				Permitted to opt for maximum two additional courses for the award of Honours or Minor specialization															

^s proficiency in course/subject-includes the weightage towards ability/skill/competence/knowledge level/ expertise attained etc. in that particular course/subject.

MCQ: Multiple Choice Question

AO: Assignment + Oral

PP: Pen Paper

SO: Submission + Oral

Mode of Teaching					Mode of Examination					Total Credits
Theory			Lab	NEC	Theory			Lab	NEC	
Offline	Online	Blended	Offline	Interactive	PP	AO	MCQ	SO	SO	
-	-	12	05	-	06	-	06	05	-	17
00	-	70.58%	29.42%	-	35.29%	-	35.29%	29.42%	-	Credits %

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

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DE -2		
S. No.	Subject Code	Subject Name
1.	240731	Robot Operating System
2.	240732	Humanoid Robotics
3.	240733	Pattern Recognition
OC-2		
S. No.	Subject Code	Subject Name
1.	910203	IoT and Its Applications
2.	910204	Software Testing

DE-3*		
S. No.	Subject Code	Subject Name
1.	240761	Statistical Learning For Reliability Analysis (12 Weeks)
2.	240762	Computer Graphics (8 Weeks)
3.	240763	Google Cloud Computing Foundations (8 Weeks)
DE-4*		
S. No.	Subject Code	Subject Name
1.	240764	Deep Learning (12 Weeks)
2.	240765	Social Network Analysis (12 Weeks)
3.	240766	Computer Vision (12 Weeks)

List of courses to be opted for Honours or Minor specialization in VII Semester

Honours*		Minor specialization *	
<i>(to be opted by students of Parent Department)</i>		<i>(to be opted by students of Other Department)</i>	
Course Code	Course Name	Course Code	Course Name
AI0522H1	Machine Learning for Earth System Sciences (8 Weeks)	AI0522M2	Introduction to Operating Systems (8 Weeks)
AI0522H2	Design & Implementation of Human-Computer Interfaces (12 Weeks)	AI0623M3	Design and analysis of algorithms (8 Weeks)
AI0522H3	The Joy of Computing using Python (12 Weeks)	AI0623M1	Programming, Data Structures and Algorithms in Python (8 Weeks)
AI0723H1	Applied Accelerated Artificial Intelligence (12 Weeks)	AI0723M1	Artificial Intelligence: Search Methods For Problem Solving (12 Weeks)
AI0723H2	Advanced Distributed Systems (12 Weeks)	AI0723M2	Distributed Systems (8 Weeks)
AI0723H3	Introduction To Haskell Programming (8 Weeks)	AI0723M3	Cloud Computing (8 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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Department of Information Technology

Scheme of Evaluation

B. Tech. in Information Technology (Artificial Intelligence and Robotics)

V Semester

(for batch admitted in academic session 2021-22)

S. No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted							Total Marks	Contact Hours per week			Total Credits	Mode of Teaching	Mode of Exam.
				Theory Slot				Practical Slot				L	T	P			
				End Term Evaluation		Continuous Evaluation		End Sem. Exam.	Continuous Evaluation								
				End Sem. Exam.	^s Proficiency in subject /course	Mid Sem. Exam.	Quiz/ Assignment		Lab work & Sessional	Skill Based Mini Project							
1.	240501	BSC	Discrete Structures	50	10	20	20	-	-	-	100	2	1	-	3	Offline	PP
2.	240502	DC	Data Science using Python	50	10	20	20	60	20	20	200	3	-	2	4	Blended	MCQ
3.	240503	DC	Theory of Computation	50	10	20	20	60	20	20	200	2	1	2	4	Blended	PP
4.	240504	DC	Robotics System and Control	50	10	20	20	60	20	20	200	3	-	2	4	Blended	PP
5.	240505	DC	Soft Computing Techniques	50	10	20	20	-	-	-	100	3	-	-	3	Blended	PP
6.	240506	DLC	Minor Project-I **	-	-	-	-	60	40	-	100	-	-	4	2	Offline	SO
7.	240507	Seminar/ Self-Study	Self-learning/Presentation (SWAYAM/NPTEL/ MOOC)#	-	-	-	-	-	40	-	40	-	-	2	1	Online and Mentoring	SO
8.	200XXX	CLC	Novel Engaging Course (Informal Learning)	-	-	-	-	50	-	-	50	-	-	2	1	Interactive	SO
9.	240508	DLC	Summer Internship Project-II (Evaluation)	-	-	-	-	60	-	-	60	-	-	4	2	Offline	SO
Total				250	50	100	100	350	140	60	1050	13	02	18	24	-	-
10.	1000006	MAC	Disaster Management	50	10	20	20	-	-	-	100	2	-	-	GRADE	Online	MCQ
Additional Course for Honours or minor Specialization				Permitted to opt for maximum two additional courses for the award of Honours or Minor specialization													

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

** The minor project-I may be evaluated by an internal committee for awarding sessional marks.

Compulsory registration for one online course using SWAYAM/NPTEL/ MOOC, evaluation through attendance, assignments and presentation

Mode of Teaching					Mode of Examination					Total Credits
Theory			Lab	NEC	Theory			Lab	NEC	
Offline	Online	Blended	Offline	Interactive	PP	AO	MCQ	SO	SO	
03	-	12	08	01	12	-	03	08	01	24
12.50%	-	50.00%	33.33%	4.17%	50.00%	-	12.50%	33.33%	4.17%	Credits %

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Department of Information Technology

Scheme of Evaluation

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

(for batch admitted in academic session 2021-22)

S. No.	Subject Code	Category Code	Subject Name	Maximum Marks Allotted							Total Marks	Contact Hours per week			Total Credits	Mode of Teaching	Mode of Exam.
				Theory Slot				Practical Slot				L	T	P			
				End Term Evaluation		Continuous Evaluation		End Sem. Exam.	Continuous Evaluation								
				End Sem. Exam.	§Proficiency in subject /course	Mid Sem. Exam.	Quiz/Assignment		Lab work & Sessional	Skill Based Mini Project							
1.	270501	DC	Information Retrieval	50	10	20	20	-	-	-	100	2	1	-	3	Blended	PP
2.	270502	DC	Data Science using Python	50	10	20	20	60	20	20	200	3	-	2	4	Blended	MCQ
3.	270503	DC	Theory of Computation	50	10	20	20	60	20	20	200	2	1	2	4	Blended	PP
4.	270504	DC	Computer Graphics & Multimedia	50	10	20	20	60	20	20	200	2	1	2	4	Blended	PP
5.	270505	DC	Soft Computing Techniques	50	10	20	20	-	-	-	100	3	-	-	3	Blended	PP
6.	270506	DLC	Minor Project-I **	-	-	-	-	60	40	-	100	-	-	4	2	Offline	SO
7.	270507	Seminar/ Self-Study	Self-learning/Presentation (SWAYAM/NPTEL/ MOOC)#	-	-	-	-	-	40	-	40	-	-	2	1	Online and Mentoring	SO
8.	200XXX	CLC	Novel Engaging Course (Informal Learning)	-	-	-	-	50	-	-	50	-	-	2	1	Interactive	SO
9.	270508	DLC	Summer Internship Project-II (Evaluation)	-	-	-	-	60	-	-	60	-	-	4	2	Offline	SO
Total				250	50	100	100	350	140	60	1050	12	03	18	24	-	-
10.	1000006	MAC	Disaster Management	50	10	20	20	-	-	-	100	2	-	-	GRADE	Online	MCQ
Additional Course for Honours or minor Specialization				Permitted to opt for maximum two additional courses for the award of Honours or Minor specialization													

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Compulsory registration for one online course using SWAYAM/NPTEL/ MOOC, evaluation through attendance, assignments and presentation

Mode of Teaching					Mode of Examination					Total Credits
Theory			Lab	NEC	Theory			Lab	NEC	
Offline	Online	Blended	Offline	Interactive	PP	AO	MCQ	SO	SO	
-	-	15	08	01	12	-	03	08	01	24
-	-	62.50%	33.33%	4.17%	50.00%	-	12.50%	33.33%	4.17%	Credits %

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				End Term Evaluation		Continuous Evaluation		End Sem. Exam.	Continuous Evaluation								
				End Sem. Exam.	[§] Proficiency in subject /course	Mid Sem. Exam.	Quiz/ Assignment		Lab work & Sessional	Skill Based Mini Project							
1.	280501	DC	Information Retrieval	50	10	20	20	-	-	-	100	2	1	-	3	Blended	PP
2.	280502	DC	Data Science using Python	50	10	20	20	60	20	20	200	3	-	2	4	Blended	MCQ
3.	280503	DC	Theory of Computation	50	10	20	20	60	20	20	200	2	1	2	4	Blended	PP
4.	280504	DC	Computer Graphics & Multimedia	50	10	20	20	60	20	20	200	2	1	2	4	Blended	PP
5.	280505	DC	Soft Computing Techniques	50	10	20	20	-	-	-	100	3	-	-	3	Blended	PP
6.	280506	DLC	Minor Project-I **	-	-	-	-	60	40	-	100	-	-	4	2	Offline	SO
7.	280507	Seminar/ Self-Study	Self-learning/Presentation (SWAYAM/NPTEL/ MOOC)#	-	-	-	-	-	40	-	40	-	-	2	1	Online and Mentoring	SO
8.	200XXX	CLC	Novel Engaging Course (Informal Learning)	-	-	-	-	50	-	-	50	-	-	2	1	Interactive	SO
9.	280508	DLC	Summer Internship Project-II (Evaluation)	-	-	-	-	60	-	-	60	-	-	4	2	Offline	SO
Total				250	50	100	100	350	140	60	1050	12	03	18	24	-	-
10.	1000006	MAC	Disaster Management	50	10	20	20	-	-	-	100	2	-	-	GRADE	Online	MCQ
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Theory			Lab	NEC	Theory			Lab	NEC	
Offline	Online	Blended	Offline	Interactive	PP	AO	MCQ	SO	SO	
-	-	15	08	01	12	-	03	08	01	24
-	-	62.50%	33.33%	4.17%	50.00%	-	12.50%	33.33%	4.17%	Credits %