



**SAGE UNIVERSITY, INDORE**  
**Institute Name: Institute of Advance Computing**  
**Department Name: Advance Computing**  
**PROGRAM STRUCTURE**  
**CHOICE BASED CREDIT SYSTEM (CBCS)**  
**Effective for: ACADEMIC SESSION: 2024- 2025**

**Program Code: MTech (DS)**  
**Admission Batch: 2023-24,2024-25**

<b>Course</b>	<b>M.Tech.</b>	<b>Branch: Data Science</b>
<b>Year / Semester</b>	<b>1st Year / I Sem</b>	

**Subject wise Distribution of Marks and corresponding Credits**

S. No.	Subject Code	Category	Subject Title	Maximum Marks Allotted												Credits	Hours
				Theory (100 Marks)			Studio/Practical (50 marks)			Total	Hours / Week			SM	NTCC		
				End Sem. Exam (ESE)	Continuous Internal Evaluation (CIE)		End Sem. Exam (ESE) For Practical and Viva	Continuous Internal Evaluation			L	T	P				
					Mid Sem. Test (MST)	Attendance / Quiz/ Assignment		Lab Work/ WPR	Attendance/Assignment/ Viva/Lab Manual	Total Marks							
1	ACTDCMAC001T	DC	Mathematics for Computing	60	20	20	-	-	-	100	4	0	0		4	4	
2	ACTDCCAC002T	DC	Computability, Algorithms, and Complexity	60	20	20	-	-	-	100	3	0	0		3	3	
3	ACTDCIDS003T	DC	Introduction to Data Science	60	20	20	-	-	-	100	3	0	0		3	3	
4	ACTDCIPS003T	DC	Introduction to Problem Solving & Reasoning	60	20	20	-	-	-	100	3	0	0		3	3	
5	ACTDEXXXXXXT	DE	Departmental Elective -2	60	20	20	-	-	-	100	4	0	0		4	4	
6	ACTDCCAC002P	DC	Computability, Algorithms, and Complexity	-	-	-	30	10	10	50	0	0	2		1	2	
7	ACTDCIDS003P	DC	Introduction to Data Science	-	-	-	30	10	10	50	0	0	2		1	2	
8	ACTDSXXXXXXP	DSEEC	Departmental Skill				30	10	10	50	0	0	4		2	4	
9	ACTDCIPS003P	DC	Introduction to Problem Solving & Reasoning	-	-	-	30	10	10	50	0	0	2		1	2	
<b>Total:</b>				300	100	100	120	40	40	700	17	0	10	4	22	27	

<b>Departmental Skill Enhancement Elective Course (DSEEC - 1)</b>		
1	ACTDSPPY001P	Programming in PYTHON
2	ACTDSPIJ002P	Programming in Java
3	ACTDSPPG003P	Pig Programming
<b>Departmental Elective ( DE-2)</b>		
1	ACTDEICL001T	Information Security & Cyber Law
2	ACTDEEVC002T	Evolutionary Computing

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<u>Year / Semester</u>		<u>1st Year /II Sem</u>																
<b>Subject wise Distribution of Marks and corresponding Credits</b>																		
S. No.	Subject Code	Category	Subject Title	Maximum Marks Allotted												Credits	Hours	
				Theory (100 Marks)			Studio/Practical (50 marks)			Total	Hours / Week							NTCC Studio/Assignment/Field Work
				End Sem. Exam (ESE)	Continuous Internal Evaluation (CIE)		End Sem. Exam (ESE) For Practical and Viva	Continuous Internal Evaluation (CIE)			L	T	P	SM				
					Mid Sem. Test (MST)	Attendance/ Quiz/ Assignment		Lab Work/ WPR	Attendance/Assignment/ Viva/Lab Manual									
1	ACTDCMW004T	DC	Data Mining and Data	60	20	20	-	-	-	100	3	0	0		3	3		
2	ACTDCADB005T	DC	Analytic Database	60	20	20	-	-	-	100	3	0	0		3	3		
3	ACTDCDEP005T	DC	Deep learning	60	20	20	-	-	-	100	4	0	0		4	4		
4	ACTDEXXXXXXT	DE	Departmental Elective - 4	60	20	20	-	-	-	100	4	0	0		4	4		
5	ACTDEXXXXXXT	DE	Departmental Elective - 5	60	20	20	-	-	-	100	4	0	0		4	4		
6	ACTDCMW004P	DC	Data Mining and Data Warehousing	-	-	-	30	10	10	50	0	0	2		1	2		
7	ACTDCADB005P	DC	Analytic Database	-	-	-	30	10	10	50	0	0	2		1	2		
8	ACTDSXXXXXP	DSEEC	Departmental Skill Enhancement Elective Course - 2				30	10	10	50	0	0	4		2	4		
<b>Total:</b>				300	100	100	90	30	30	650	18	0	8	4	22	26		

<b>Departmental Skill Enhancement Elective Course (DSEC - 2)</b>		
1	ACTDSRPG004P	R Programming
2	ACTDSHIP005P	HIVE Programming
<b>Departmental Elective ( DE - 5)</b>		
1	ACTDEDPU002T	Data Privacy & User Protection
2	ACTDEITS002T	Intelligent System

<b>Departmental Elective ( DE - 4)</b>		
1	ACTDEIVA006T	Image and Video Analysis
2	ACTDEITS007T	Web Database and Information System

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<b>Course</b>	<b>M.Tech.</b>	<b>Branch: Data Science</b>
<b>Year / Semester</b>	<b>2nd Year /III Sem</b>	

**Subject wise Distribution of Marks and corresponding Credits**

S. No.	Subject Code	Category	Subject Title	Maximum Marks Allotted											Credits	Hours
				Theory (100 Marks)			Studio/Practical (50 marks)			Total	Hours / Week			NTCC		
				End Sem. Exam (ESE)	Continuous Internal Evaluation (CIE)		End Sem. Exam (ESE) For Practical and Viva	Continuous Internal Evaluation (CIE)			Total Marks	L	T			
					Mid Sem. Test (MST)	Attendance/ Quiz/ Assignment		Lab Work/ WPR	Attendance/Assignment/ Viva/Lab Manual							
1	ACTDCDPM006T	DC	Data Mining & Predictive Modelling	60	20	20	-	-	-	100	4	0	0		4	4
2	ACTDCREM007T	DC	Research Methodology	60	20	20	-	-	-	100	4	0	0		4	4
3	ACTDEXXXXXXT	DE	Departmental Elective - 6	60	20	20	-	-	-	100	4	0	0		4	4
4	ACTDEXXXXXXT	DE	Departmental Elective - 7	60	20	20	-	-	-	100	4	0	0		4	4
5	ACTDSIIN001N	DSEEC	Internship					20	30	50	0	0	4	4	2	-
6	ACTDPDIS001N	DAP	Dissertation-1	-	-	-		40	60	100	0	0	0	12	6	0
<b>Total:</b>				240	80	80		60	90	550	16	0	4	16	24	16

Departmental Skill Enhancement Elective Course (DSEEC- 3)		
1	ACTDSAWS006P	Amazon Web Services
2	ACTDSMLT007P	Machine Learning Techniques

Departmental Elective ( DE- 6)		
1	ACTDENLP008T	Natural Language Processing
2	ACTDEINR009T	Information Retrieval
Departmental Elective ( DE- 7)		
1	ACTDEDAV010T	Data Analytics and Visualization
2	ACTDECMV011T	Computer Vision

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<b>Year / Semester</b>		<b>2nd Year /IV Sem</b>														
<b>Subject wise Distribution of Marks and corresponding Credits</b>																
S. No.	Subject Code	Category	Subject Title	Maximum Marks Allotted											Credits	Hours
				Theory (100 Marks)			Studio/Practical (50 marks) (50 Marks)		Total	Hours / Week			NTCC			
				End Sem. Exam (ESE)	Continuous Internal Evaluation (CIE)		End Sem. Exam (ESE) For Practical and Viva	Continuous Internal Evaluation (CIE)		Total Marks	L	T		P		
					Mid Sem. Test (MST)	Attendance/ Quiz/ Assignment		Lab Work/ WPR	Attendance/Assignment/ Viva/Lab Manual							
1	ACTDSXXXXXXXP	DSEEC	Departmental Skill				30	10	10	50	0	0	4	4	2	
2	ACTDPDIS002N	DAP	Dissertation-2	-	-	-		40	60	100	0	0	0	30	15	0
<b>Total:</b>				0	0	0	30	50	70	150	0	0	4	34	17	0

Departmental Skill Enhancement Elective Course (DSEEC- 4)		
1	ACTDSDMT008M	Data Mining Tools
2	ACTDSADB09M	Advanced DBMS

Legends		
L= Lecture	1 Hr	1 CR
T= Tutorial	1 Hr	1 CR
P= Practical	2 Hr	1 CR
S= Studio	1 Hr	1.5 CR
NTCC = Non Teaching Credit Course	2 Hr	1 CR
M= MOOC	SWAYAM/NPTEL	Certificate
BM = Blended MOOC	1 Hr	1 CR

Offered Credit Summary	
Semester	M.Tech. (AI)
I	22
II	22
III	24
IV	17
Total:	85

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