



**SAGE UNIVERSITY, INDORE**  
**Institute Name: Institute of Advance Computing**  
**Department Name: Advance Computing (Specialization)**  
**PROGRAM STRUCTURE**

**Program Code: B Tech (CT-AI)**  
**Admission Batch: 2024-25**

**CHOICE BASED CREDIT SYSTEM (CBCS)**  
**Effective for: ACADEMIC SESSION: 2024-25**

Course		B. Tech. (Computer Technology in Artificial Intelligence)															
Year / Semester		1st Year/ I Semester															
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.						
				End Sem. Exam (ESE)	Continuous Internal Evaluation (CIE)		End Sem. Exam (ESE) For Practical and Viva	Lab Work/ WPR	Continuous Internal Evaluation (CIE)		L	T	P	SM			NTCC Studio/Assignment/Field Work
					Mid Sem. Test (MST)	Attendance/Quiz/Assignment			Attendance/Assignment/Viva/Lab Manual	Total Marks							
1	ACTDCLIA001T	DC	Linear Algebra	60	20	20	-	-	-	100	4	0	0		4	4	
2	ACTDCAPY002T	DC	Applied Physics	60	20	20	-	-	-	100	3	0	0		3	3	
3	ACTDCLAD003T	DC	Introduction to AI, Data Science, Ethics and Foundation of Data Analytics using SQL	60	20	20	-	-	-	100	3	0	0		3	3	
4	ACTDCIPR004T	DC	Introduction to Problem Solving & Reasoning	60	20	20	-	-	-	100	4	0	0		4	4	
5	To be selected *	GE	General Elective -1*	60	20	20				100	2	0	0	4	4	6	
6	AECACCOS001T	AECC	Communication Skills	60	20	20	-	-	-	100	3	0	0		3	3	
7	ACTDCAPY002P	DC	Applied Physics Lab	-	-	-	30	10	10	50	0	0	2		1	2	
8	ACTDCLAD003P	DC	Introduction to AI, Data Science, Ethics and Foundation of Data Analytics using SQL Lab	-	-	-	30	10	10	50	0	0	2		1	2	
9	ACTDSXXXXXP	DSEEC	Departmental Skill Enhancement Elective Course -1	-	-	-	30	10	10	50	0	0	4		2	4	
10	AECACCOS001P	AECC	Communication Skills Lab	-	-	-	30	10	10	50	0	0	2		1	2	
<b>Total</b>				360	120	120	120	40	40	800	19	0	10	4	0	26	33

Departmental Skill Enhancement Elective Course (DSEEC- 1)		
1	ACTDSPIC001P	Programming in C
2	ACTDSPYT002P	Programming in PYTHON
3	ACTDSWEP003P	Web Programming

General Elective ( GE - 1)(Offered by IAC for the students of other institutes)	
ACTGECOE001B**	Computer Basics & Office Essentials

Note: Industrial Internship 1 to be completed before start of V Semester, i.e. evaluation and credit to be added in V Semester.  
 \*Students required to opt general elective from the Courses offered by other institutes under group 1 in GE category

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**PROGRAM STRUCTURE**  
**CHOICE BASED CREDIT SYSTEM (CBCS)**  
**Effective for: ACADEMIC SESSION: 2024-25**

**Program Code: B Tech (CT-AI)**  
**Admission Batch: 2024-25**

Course		B. Tech. (Computer Technology in Artificial Intelligence)															
Year / Semester		1st Year /II Sem															
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.						
				End Sem. Exam (ESE)	Continuous Internal Evaluation (CIE)		End Sem. Exam (ESE) For Practical and Viva	Continuous Internal Evaluation (CIE)			L	T	P	SM	NTCC Studio/Assignment/Field Work		
					Mid Sem. Test (MST)	Attendance/Quiz/Assignment		Lab Work/W PR	Attendance/Assignment/Viva/Lab Manual								
1	ACTDCCLE005T	DC	Calculus for Engineers	60	20	20	-	-	-	100	4	0	0		-	4	4
2	ACTDCDSS006T	DC	Data Structure and Complexity	60	20	20	-	-	-	100	3	0	0		-	3	3
3	ACTDCBEX007T	DC	Basic Electronics	60	20	20	-	-	-	100	4	0	0		-	4	4
4	ACTDCDAP008T	DC	Data Analysis Using Python	60	20	20	-	-	-	100	3	0	0		-	3	3
5	To be selected *	GE	General Elective -2*	60	20	20				100	2	0	0	4	-	4	6
6	AECACUHV001T	AECC	Universal Human Values and Professional Ethics	60	20	20	-	-	-	100	2	0	0		-	2	2
7	ACTDCDSS006P	DC	Data Structure and Complexity Lab	-	-	-	30	10	10	50	0	0	2		-	1	2
8	ACTDCDAP008P	DC	Data Analysis Using Python Lab	-	-	-	30	10	10	50	0	0	2		-	1	2
9	ACTDSXXXXXP	DSEEC	Departmental Skill Enhancement Elective Course -2	-	-	-	30	10	10	50	0	0	4		-	2	4
10	AECACUHV001N	AECC	Universal Human Values and Professional Ethics	-	-	-		20	30	50	0	0		4	2	0	
11	ACTDPMIP001N	DAP	Micro Project-1	-	-	-	-	20	30	50	0	0	0		4	2	0
<b>Total:</b>				360	120	120	90	70	90	850	18	0	8	4	8	28	30

Departmental Skill Enhancement Elective Course (DSEEC- 2)		
1	ACTDSOPC004P	Object Oriented Programming using C++
2	ACTDSOPI005P	Object Oriented Programming using JAVA
3	ACTDSPHP006P	PHP Programming

General Elective ( GE - 2) (Offered by IAC for the students of other institutes)	
ACTGEPYP002B**	PYTHON Programming

Note: Industrial Internship I to be completed before start of V Semester, i.e. evaluation and credit to be added in V Semester.  
 \*Students required to opt general elective from the Courses offered by other institutes under group 2 in GE category

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**PROGRAM STRUCTURE**  
**CHOICE BASED CREDIT SYSTEM (CBCS)**  
**Effective for: ACADEMIC SESSION: 2024-25**

**Program Code: B Tech (CT-AI)**  
**Admission Batch: 2024-25**

<u>Course</u>		<b>B. Tech. (Computer Technology in Artificial Intelligence)</b>																
<u>Year / Semester</u>		<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	P			SM	Stu di o/Assi gnme nt /Field Work
					Mid Sem. Test (MST)	Attendan ce/ Quiz/ Assignme nt		Lab Work/ WPR	Attendance /Assignment/ Viva/Lab Manual									
1	ACTDCOSS009T	DC	Operating System & Security	60	20	20	-	-	-	100	3	0	0			3	3	
2	ACTDCLT010T	DC	Computation & Logical Thinking	60	20	20	-	-	-	100	4	0	0			4	4	
3	ACTDEXXXXXXT	DE	Departmental Elective -I	60	20	20	-	-	-	100	3	0	0			3	3	
4	ACTDEXXXXXXT	DE	DE-2	60	20	20	-	-	-	100	4	0	0			4	4	
5	AEACEVS001T	AECC	Environmental Science & Disaster Management	60	20	20	-	-	-	100	3	0	0		-	3	3	
6	To be selected *	GE	General Elective - 3*	60	20	20				100	2	0	0	4		4	6	
7	ACTDCOSS009P	DC	Operating System & Security Lab				30	10	10	50	0	0	2			1	2	
8	ACTDEXXXXXXP	DE	Departmental Elective -I Lab	-	-	-	30	10	10	50	0	0	2			1	2	
9	AEACEVS001N	AECC	Environmental Science & Disaster Management Lab	-	-	-		20	30	50	0	0			2	1	0	
10	ACTDSXXXXXXP	DSEEC	Departmental Skill Enhancement Elective Course - 3	-	-	-	30	10	10	50	0	0	4			2	4	
<b>Total:</b>				360	120	120	90	50	60	800	19	0	8	4		26	31	

Departmental Elective Course (DE-1)				Departmental Elective Course (DE-2)			
1	ACTDEISA001T/P	Java Scripting with AJAX		ACTDECAS003T	Cloud Architecture & Services		
2	ACTDEPMR002T/P	Probabilistic Modeling and Reasoning with Python		ACTDEBCG004T	Bioinformatics & Computational Genomics		
Departmental Skill Enhancement Elective Course (DSEEC-3)				General Elective (GE-3) (Offered by IAC)			
1	ACTDSJAV007P	Advance JAVA		ACTGEFCC003B**	Fundamentals of Cloud Computing		
2	ACTDSRPG008P	R programming for Data Science and Data Analysis					

Note: Industrial Internship I to be completed before start of V Semester, i.e. evaluation and credit to be added in V Semester.

\*Students required to opt general elective from the Courses offered by other institutes under group 3 in GE category

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 Department Name: Advance Computing (Specialization)  
 PROGRAM STRUCTURE  
 CHOICE BASED CREDIT SYSTEM (CBCS)  
 Effective for: ACADEMIC SESSION: 2024-25

Program Code: B Tech (CT-AI)  
 Admission Batch: 2023-24

Course		B. Tech. (Computer Technology in Artificial Intelligence)																
Year / Semester		2nd Year / III Sem																
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	P			SM	Study/Assignment/Field Work
					Mid Sem. Test (MST)	Attendance/Quiz/Assignment		Lab Work/WPR	Attendance/Assignment/Viva/Lab Manual									
1	ACTDCOSS009T	DC	Operating System & Security	60	20	20	-	-	-	100	3	0	0			3	3	
2	ACTDCCLT010T	DC	Computation & Logical Thinking	60	20	20	-	-	-	100	4	0	0			4	4	
3	ACTDEXXXXXT	DE	Departmental Elective -1	60	20	20	-	-	-	100	3	0	0			3	3	
4	ACTDEXXXXXT	DE	DE-2	60	20	20	-	-	-	100	4	0	0			4	4	
5	To be selected *	GE	General Elective - 3*	60	20	20				100	2	0	0	4		4	6	
6	ACTDCOSS009P	DC	Operating System & Security Lab				30	10	10	50	0	0	2			1	2	
7	ACTDEXXXXXP	DE	Departmental Elective -1 Lab	-	-	-	30	10	10	50	0	0	2			1	2	
8	ACTDSXXXXXP	DSEEC	Departmental Skill Enhancement Elective Course - 3	-	-	-	30	10	10	50	0	0	4			2	4	
<b>Total:</b>				300	100	100	90	30	30	650	16	0	8	4		22	28	

Departmental Elective Course (DE-1)				Departmental Elective Course (DE-2)			
1	ACTDEJSA001T/P	Java Scripting with AJAX		ACTDECAS003T	Cloud Architecture & Services		
2	ACTDEPMR002T/P	Probabilistic Modeling and Reasoning with Python		ACTDEBCG004T	Bioinformatics & Computational Genomics		
Departmental Skill Enhancement Elective Course (DSEEC-3)				General Elective (GE-3) (Offered by IAC)			
1	ACTDSJAV007P	Advance JAVA		ACTGEFCC003B**	Fundamentals of Cloud Computing		
2	ACTDSRPG008P	R programming for Data Science and Data Analysis					

Note: Industrial Internship I to be completed before start of V Semester, i.e. evaluation and credit to be added in V Semester.  
 \*Students required to opt general elective from the Courses offered by other institutes under group 3 in GE category

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PROGRAM STRUCTURE  
**CHOICE BASED CREDIT SYSTEM (CBCS)**  
**Effective for: ACADEMIC SESSION: 2024-25**

**Program Code: B Tech (CT-AI)**  
**Admission Batch: 2023-24, 2024-25**

Course		B. Tech. (Computer Technology in Artificial Intelligence)															
Year / Semester		2nd Year / IV Sem															
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 Marks	Hours / Week.						
				End Sem. Exam (ESE)	Continuous Internal Evaluation (CIE)		End Sem. Exam (ESE) For Practical and Viva	Continuous Internal Evaluation (CIE)			L	T	P	SM			NTCC Studio/Assignment/Field Work
					Mid Sem. Test (MST)	Attendance/ Quiz/ Assignment		Lab Work/ WPR	Attendance/Assignment/ Viva/Lab Manual								
1	ACTDCDBS011T	DC	Relational Database Management System	60	20	20	-	-	-	100	3	0	0			3	3
2	ACTDCATC012T	DC	Automata Theory & Computability	60	20	20	-	-	-	100	4	0	0			4	4
3	ACTDEXXXXXT	DE	Departmental Elective -3	60	20	20	-	-	-	100	3	0	0			3	3
4	ACTDEXXXXXT	DE	Departmental Elective -4	60	20	20	-	-	-	100	4	0	0			4	4
5	To be selected *	GE	General Elective - 4*	60	20	20				100	2	0	0	4		4	6
6	ACTDCDBS011P	DC	Relational Database Management System Lab	-	-	-	30	10	10	50	0	0	2			1	2
7	ACTDEXXXXXP	DE	Departmental Elective-3 Lab	-	-	-	30	10	10	50	0	0	2			1	2
8	ACTDSXXXXXP	DSEEC	Departmental Skill Enhancement Elective Course - 4	-	-	-	30	10	10	50	0	0	4			2	4
9	ACTDPXXX002N	DAP	Micro Project-II	-	-	-	-	20	30	50	0	0	0		4	2	0
<b>Total:</b>				300	100	100	90	50	60	700	16	0	8	4	4	24	28

Departmental Elective Course (DE-3)		
1	ACTDEMIF005T/P	Microprocessor and Interfacing
2	ACTDEMLP006T/P	Machine Learning and Pattern Recognition

General Elective (GE-4) (Offered by IAC)	
ACTGEFA1004B**	Fundamentals of Artificial Intelligence

Departmental Elective Course (DE-4)		
1	ACTDESFE007T	Software Engineering
2	ACTDEAV008T	Data Visualization I

Departmental Skill Enhancement Elective Course (DSEEC-4)	
ACTDSMLT009P	Machine Learning Tools & Technique
ACTDSDCS010P	Digital Circuits & System

Note: Industrial Internship I to be completed before start of V Semester, i.e. evaluation and credit to be added in V Semester.  
 \*Students required to opt general elective from the Courses offered by other institutes under group 4 in GE category

HOD, IAC



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**PROGRAM STRUCTURE**  
**CHOICE BASED CREDIT SYSTEM (CBCS)**  
**Effective for: ACADEMIC SESSION: 2024-25**

**Program Code: B Tech (CT-AI)**  
**Admission Batch: 2022-23, 2023-24, 2024-25**

<b>Course</b>		<b>B. Tech. (Computer Technology in Artificial Intelligence)</b>																	
<b>Year / Semester</b>		<b>3rd Year / V 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.						
				End Sem. Exam (ESE)	Continuous Internal Evaluation (CIE)		End Sem. Exam (ESE) For Practical and Viva	Continuous Internal Evaluation (CIE)			L		T	P	SM			NTCC Studio/Assignment/Field Work	
					Mid Sem. Test (MST)	Attendance/Quiz/Assignment		Lab Work/WPR	Attendance/Assignment/Viva/Lab Manual										
1	ACTDCNND013T	DC	Neural Networks and Deep Learning	60	20	20	-	-	-	100	4	0	0		4	4			
2	ACTDEXXXXXT	DE	Departmental Elective -5	60	20	20	-	-	-	100	3	0	0		3	3			
3	ACTDEXXXXXT	DE	Departmental Elective -6	60	20	20	-	-	-	100	3	0	0		3	3			
4	ACTDEXXXXXT	DE	Departmental Elective -7	60	20	20	-	-	-	100	4	0	0		4	4			
5	ACTDEXXXXXT	DE	Departmental Elective -8	60	20	20	-	-	-	100	3	0	0		3	3			
6	ACTDCES001T	DC	Emotion and Sentiment Intelligence	60	20	20				100	4	0	0		4	4			
7	ACTDEXXXXXP	DE	Departmental Elective -5 Lab	-	-	-	30	10	10	50	0	0	2		1	2			
8	ACTDEXXXXXP	DE	Departmental Elective -6 Lab				30	10	10	50	0	0	2		1	2			
9	ACTDEXXXXXP	DE	Departmental Elective -8 Lab	-	-	-	30	10	10	50	0	0	2		1	2			
10	ACTDSXXXXXP	DSEEC	Departmental Skill Enhancement Elective Course - 5	-	-	-	30	10	10	50	0	0	4		2	4			
11	ACTDSIH001N	DSEEC	Internship- 1**	-	-	-	-	20	30	50	-	-	-	4	2	0			
<b>Total:</b>				360	120	120	120	60	70	850	21	0	10	0	4	28	31		

Departmental Elective Course (DE-5)		
1	ACTDEDTK009T/P	Deep Learning with TensorFlow and Keras
2	ACTDEHDB010T/P	Heterogeneous Database

Departmental Skill Enhancement Elective Course (DSEEC-5)		
	ACTDSNET011P	.Net Programming
	ACTDSWRP012P	Working with Raspberry Pi and Arduino

Departmental Elective Course (DE-6)		
1	ACTDEDBC011T/P	Distributed Computing
2	ACTDECN012T/P	Computer Network & Communication

Departmental Elective Course (DE-8)		
1	ACTDEIMP027T/P	Image Processing
2	ACTDEGTA028T/P	Game Theory with Artificial Intelligence

Departmental Elective Course (DE-7)		
1	ACTDEEVC013T	Evolutionary Computing
2	ACTDESQL014T	Advance SQL

\*\*Certification Program from the industry will be considered

Note: Industrial Internship II to be completed after VI semester and before start of VII Semester, i.e. evaluation and credit to be added in VII Semester.



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**PROGRAM STRUCTURE**  
**CHOICE BASED CREDIT SYSTEM (CBCS)**  
**Effective for: ACADEMIC SESSION: 2024-25**

**Program Code: B Tech (CT-AI)**  
**Admission Batch: 2022-23, 2023-24, 2024-25**

Course		B. Tech. (Computer Technology in Artificial Intelligence)															
Year / Semester		3rd Year / V Sem															
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.						
				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	SM		
					Mid Sem. Test (MST)	Attendance/Quiz/Assignment		Attendance/Assignment/Viva/Lab Work/WPR	Attendance/Assignment/Viva/Lab Manual								
1	ACTDCAML013T	DC	Advance Machine Learning	60	20	20	-	-	-	100	4	0	0			4	4
2	ACTDEXXXXXT	DE	Departmental Elective -5	60	20	20	-	-	-	100	3	0	0			3	3
3	ACTDEXXXXXT	DE	Departmental Elective -6	60	20	20	-	-	-	100	3	0	0			3	3
4	ACTDEXXXXXT	DE	Departmental Elective -7	60	20	20	-	-	-	100	4	0	0			4	4
5	ACTDEXXXXXT	DE	Departmental Elective -8	60	20	20	-	-	-	100	3	0	0		-	3	3
6	ACTDCESI001T	DC	Emotion and Sentiment Intelligence	60	20	20				100	4	0	0			4	4
7	ACTDEXXXXXXP	DE	Departmental Elective -5 Lab	-	-	-	30	10	10	50	0	0	2			1	2
8	ACTDEXXXXXXP	DE	Departmental Elective -6 Lab				30	10	10	50	0	0	2			1	2
9	ACTDEXXXXXXP	DE	Departmental Elective -8 Lab	-	-	-	30	10	10	50	0	0	2		-	1	2
10	ACTDSXXXXXP	DSEEC	Departmental Skill Enhancement Elective Course - 5	-	-	-	30	10	10	50	0	0	4			2	4
11	ACTDSIH001N	DSEEC	Internship- 1**	-	-	-	-	20	30	50	-	-	-		4	2	0
<b>Total:</b>				360	120	120	120	60	70	850	21	0	10	0	4	28	31

Departmental Elective Course (DE-5)		
1	ACTDEDST009T/P	Scala for Data Science-Tools and Techniques
2	ACTDEHDB010T/P	Heterogeneous Database

Departmental Skill Enhancement Elective Course (DSEEC-5)		
ACTDSNET011P	.Net Programming	
ACTDSWRP012P	Working with Raspberry Pi and Arduino	

Departmental Elective Course (DE-6)		
1	ACTDEDBC011T/P	Distributed Computing
2	ACTDECNC012T/P	Computer Network & Communication

Departmental Elective Course (DE-8)		
1	ACTDEIMP027T/P	Image Processing
2	ACTDEGTA028T/P	Game Theory with Artificial Intelligence

Departmental Elective Course (DE-7)		
1	ACTDEEVC013T	Evolutionary Computing
2	ACTDESQLO14T	Advance SQL

\*\*Certification Program from the industry will be considered

Note: Industrial Internship II to be completed after VI semester and before start of VII Semester, i.e. evaluation and credit to be added in VII Semester.



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**PROGRAM STRUCTURE**  
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**Effective for: ACADEMIC SESSION: 2024-25**

**Program Code: B Tech (CT-AI)**  
**Admission Batch: 2022-23, 2023-24, 2024-25**

Course		B. Tech. (Computer Technology in Artificial Intelligence)																
Year / Semester		3rd Year / VI Sem																
Subject wise Distribution of Marks and corresponding Credits																		
S. No.	Subject Code	Category	Subject Name & Title	Maximum Marks Allotted													Credits	Hours
				Theory (100 Marks)			Studio/Practical (50 Marks)			Total Marks	Hours / Week.					NTCC/Studio/Assignment/Field Work		
				End Sem. Exam (ESE)	Continuous Internal Evaluation		End Sem. Exam (ESE) For Practical and Viva	Continuous Internal Evaluation (CIE)	Lab Work/WPR		Attendance/Assignment/Viva/Lab Manual	L	T	P	SM			
					Mid Sem. Test (MST)	Attendance/Quiz/Assignment												
1	ACTDCNND014T	DC	Deep Learning and Neural Network	60	20	20	-	-	-	100	3	0	0		-	3	3	
2	ACTDEXXXXXXT	DE	Departmental Elective -9	60	20	20	-	-	-	100	3	0	0		-	3	3	
3	ACTDEXXXXXXT	DE	Departmental Elective -10	60	20	20	-	-	-	100	4	0	0		-	4	4	
4	ACTDEXXXXXXT	DE	Departmental Elective -11	60	20	20	-	-	-	100	4	0	0		-	4	4	
5	ACTDEXXXXXXT	DE	Departmental Elective -12	60	20	20	-	-	-	100	4	0	0		-	4	4	
6	ACTDCNLP014P	DC	Deep Learning and Neural NetworkLab	-	-	-	30	10	10	50	0	0	2		-	1	2	
7	ACTDEXXXXXXP	DE	Departmental Elective -9 Lab	-	-	-	30	10	10	50	0	0	2		-	1	2	
8	ACTDSXXXXXP	DSEEC	Departmental Skill Enhancement Elective Course -	-	-	-	30	10	10	50	0	0	4		-	2	4	
9	ACTDPMNP001N	DAP	Minor Project	-	-	-	-	-	40	60	100	0	0	0		12	6	0
<b>Total:</b>				300	100	100	90	70	90	750	18	0	8	0	12	28	26	

Departmental Elective Course (DE-9)		
1	ACTDEDVT015T/P	Advance Data Visualization using Tools and Techniques
2	ACTDERIL016T/P	Reinforcement Learning
Departmental Elective Course (DE-10)		
1	ACTDEBDA017T	Big Data Analytics
2	ACTDEINR018T	Information Retrieval
Departmental Elective Course (DE-11)		
1	ACTDEHC1019T	Human Computer Interaction
2	ACTDEHPC020T	High Performance Computing

Departmental Elective Course (DE-12)		
1	ACTDERPR021T	Reasoning, Problem Solving and Robotics
2	ACTDECSM022T	Cloud Security & Management

Departmental Skill Enhancement Elective Course (DSEEC-6)		
1	ACTDSJIN013P	IOT with Jetson Nano-Kit
2	ACTDSNDB014P	NoSQL Databases

Note: Industrial Internship II to be completed after VI semester and before start of VII Semester, i.e. evaluation and credit to be added in VII Semester.





**SAGE UNIVERSITY, INDORE**  
**Institute of Advance Computing**  
**Department Name: Advance Computing (Specialization)**

**PROGRAM STRUCTURE**  
**CHOICE BASED CREDIT SYSTEM (CBCS)**  
**Effective for: ACADEMIC SESSION: 2024-25**

**Program Code: B Tech (CT-AI)**  
**Admission Batch: 2022-23, 2023-24, 2024-25**

<u>Course</u>		<b>B. Tech. (Computer Technology in Artificial Intelligence)</b>															
<u>Year / Semester</u>		<b>4th Year / VII 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.						
				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			SM
					Mid Sem. Test (MST)	Attendance/ Quiz/ Assignment		Lab Work/ WPR	Attendance/ Assignment/ Viva/Lab Manual								
1	ACTDCDMM015T	DC	Data Mining & Predictive Modelling	60	20	20	-	-	-	100	3	0	0		-	3	3
2	ACTDEXXXXXXT	DE	Departmental Elective -13	60	20	20	-	-	-	100	3	0	0		-	3	3
3	ACTDEXXXXXXT	DE	Departmental Elective -14	60	20	20	-	-	-	100	4	0	0		-	4	4
4	ACTDEXXXXXXT	DE	Departmental Elective -15	60	20	20				100	4	0	0		-	4	4
5	ACTDCDMM015P	DC	Data Mining & Predictive Modelling Lab	-	-	-	30	10	10	50	0	0	2			1	2
6	ACTDEXXXXXXP	DE	Departmental Elective -13 Lab	-	-	-	30	10	10	50	0	0	2		-	1	2
7	ACTDSXXXXXP	DSEEC	Departmental Skill Enhancement Elective Course -7	-	-	-	30	10	10	50	0	0	4		-	2	4
8	ACTDSINT002N	DSEC	Internship - II	-	-	-				20	30	0	0	0	8	4	-
<b>Total:</b>				240	80	80	90	50	60	600	14	0	8	0	8	22	22

Departmental Elective Course (DE-13)		
1	ACTDEDVS023T/P	Data Visualization
2	ACTDEHDC024T/P	Hadoop Components
Departmental Elective Course (DE-14)		
1	ACTDEPRG025T	Pattern Recognition
2	ACTDEGPU026T	GPU Programming

Departmental Elective Course (DE-15)		
1	ACTDECGC029T	Cognitive Computing
2	ACTDEAPS030T	Apache Spark
Departmental Skill Enhancement Elective Course (DSEEC-7)		
1	ACTDSSDS015P	Scala for Data Science
2	ACTDSISS016P	IOT System & Security

\*Certification Program from the industry will be considered for internship- II

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**SAGE UNIVERSITY, INDORE**  
**Institute of Advance Computing**  
**Department Name: Advance Computing (Specialization)**  
**PROGRAM STRUCTURE**

**Program Code: B Tech (CT-AI)**  
**Admission Batch: 2021-22**

**CHOICE BASED CREDIT SYSTEM (CBCS)**  
**Effective for: ACADEMIC SESSION: 2024-25**

Course		B. Tech. (Computer Technology in Artificial Intelligence)																
Year / Semester		4th Year / VII Sem																
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/ Studio/ Assignment /Field Work	
				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				SM
					Mid Sem. Test (MST)	Attendance/ Quiz/ Assignment		Lab Work/ WPR	Attendance/ Assignment/ Viva/Lab Manual									
1	ACTDCDMM015T	DC	Data Mining & Predictive Modelling	60	20	20	-	-	-	100	3	0	0	-	3	3		
2	ACTDEXXXXXXT	DE	Departmental Elective -12	60	20	20	-	-	-	100	3	0	0	-	3	3		
3	ACTDEXXXXXXT	DE	Departmental Elective -13	60	20	20	-	-	-	100	4	0	0	-	4	4		
4	ACTDEXXXXXXT	DE	Departmental Elective -14	60	20	20	-	-	-	100	4	0	0	-	4	4		
5	ACTDCDMM015P	DC	Data Mining & Predictive Modelling Lab	-	-	-	30	10	10	50	0	0	2	-	1	2		
6	ACTDEXXXXXXP	DE	Departmental Elective -12 Lab	-	-	-	30	10	10	50	0	0	2	-	1	2		
7	ACTDSXXXXXP	DSEEC	Departmental Skill Enhancement Elective Course -7	-	-	-	30	10	10	50	0	0	4	-	2	4		
8	ACTDSXXXXXP	DSEEC	Departmental Skill Enhancement Elective Course - 8	-	-	-	30	10	10	50	0	0	4	-	2	4		
9	ACTDSXXXXXP	DSEEC	Departmental Skill Enhancement Elective Course - 9	-	-	-	30	10	10	50	0	0	4	-	2	4		
10	ACTDSINT002N	DSEC	Internship - II	-	-	-	-	-	-	20	30	50	0	0	0	8	4	-
<b>Total:</b>				240	80	80	150	70	80	700	14	0	16	0	8	26	30	

Departmental Elective Course (DE-12)		
1	ACTDEDVS023T/P	Data Visualization
2	ACTDEHDC024T/P	Hadoop Components
Departmental Elective Course (DE-13)		
1	ACTDEPRG025T	Pattern Recognition
2	ACTDEGPU026T	GPU Programming

Departmental Elective Course (DE-14)		
1	ACTDECGC029T	Cognitive Computing
2	ACTDEAPS030T	Apache Spark
Departmental Skill Enhancement Elective Course (DSEEC-7)		
1	ACTDSSDS015P	Scala for Data Science
2	ACTDSSIS016P	IOT System & Security

\*Certification Program from the industry will be considered for internship- II

Departmental Skill Enhancement Elective Course (DSEEC-8)		
1	ACTDSPDM017P	CAP Stone Projects on Deep Learning & Machine Learning
2	ACTDSIAD018P	IOT Application Development
Departmental Skill Enhancement Elective Course (DSEEC-9)		
1	ACTDSIDS019P	Intrusion Detection and Prevention Lab
2	ACTDSIAM020P	Information Security Audit & Monitoring Lab



**SAGE UNIVERSITY, INDORE**  
**Institute of Advance Computing**  
**Department Name: Advance Computing (Specialization)**

**PROGRAM STRUCTURE**  
**CHOICE BASED CREDIT SYSTEM (CBCS)**

**Program Code: B Tech (CT-AI)**  
**Admission Batch: 2021-22, 2022-23, 2023-24, 2024-2**

Effective for: **ACADEMIC SESSION: 2024-25**

<u>Course</u>		<b>B. Tech. (Computer Technology in Artificial Intelligence)</b>															
<u>Year / Semester</u>		<b>4th Year / VIII Sem</b>															
Subject wise Distribution of Marks and corresponding Credits																	
S. No.	Subject Code	Category	Subject Name & Title	Maximum Marks Allotted												Credits	Hours
				Theory (0 Marks)			Studio/Practical (100 Marks)			Total	Hours / Week.			NTCC/ Studio/ Assignment /Field Work			
				End Sem. Exam (ESE)	Continuous Internal Evaluation (CIE)		End Sem. Exam (ESE) For Practical 1 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	ACTDPMJP001N	DAP	Major Project	-	-	-		40	60	100	0	0	0		24	12	0
<b>Total:</b>				-	-	-		40	60	100	0	0	0	-	24	12	0

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

Offered Credit Summary		
Semester		B.Tech. CT (Hons.)
I		26
II		28
III		26
IV		24
V		28
VI		28
VII		22
VIII		12
<b>Total</b>		<b>194</b>

HOD, IAC