

TEACHING AND EXAMINATION SCHEME

B. TECH. SEMESTER – I (B. Tech. Artificial Intelligence & Machine Learning)

(Tentative teaching scheme)

w.e.f A. Y. 2024-25

Sr. No.	Course Code	Course Name	Teaching Scheme (hours/week)				Examination Scheme			
							Duration Hours		Component Weightage	
			L	T	P	C	SEE	CE	LPW	SEE
1		Mathematics I	2	1	-	3	3	0.6	-	0.4
2		Physics	2	-	2	3	3	0.3	0.3	0.4
3		Environmental Science	2	1	-	3	3	0.6	-	0.4
4		Computer Programming	2	-	2	3	3	0.3	0.3	0.4
5		Electrical Science	2	-	2	3	3	0.3	0.3	0.4
6		General English	2	-	2	3	3	0.3	0.3	0.4
		Total	12	02	08	18				
7		Yoga (Supplementary course)	-	-	2	-	-	0.6	0.4	-

L: Lectures, P/T: Practicals / Tutorial, C: Credits

SEE: Semester End Examination

LPW/PW: Laboratory / Project Work

CE: Continuous Evaluation

B. TECH. SEMESTER – II (B. Tech. Artificial Intelligence & Machine Learning)

w.e.f A. Y. 2024-25

Sr. No.	Course Code	Course Name	Teaching Scheme				Examination Scheme			
							Duration Hours		Component Weightage	
			L	T	P	C	SEE	CE	LPW	SEE
1		Mathematics II	2	1	-	3	3	0.6	-	0.4
2		Introduction to Web programming	2	-	2	3	3	0.3	0.3	0.4
3		Engineering Drawing & Workshop	1	-	4	3	-	0.6	0.4	-
4		Written Communication	2	1	-	3	3	0.6	-	0.4
5		Introduction to AI & ML	2	-	2	3	3	0.3	0.3	0.4
6		Statistics	2	-	2	3	3	0.3	0.3	0.4
7		Contemporary India	2	1	-	3	3	0.6	-	0.4
		Total	13	03	10	21				

L: Lectures, P/T: Practicals / Tutorial, C: Credits

SEE: Semester End Examination

LPW/PW: Laboratory / Project Work

CE: Continuous Evaluation

B. TECH SEMESTER – III
(B. Tech. Artificial Intelligence & Machine Learning)

w.e.f A. Y. 2025-26

Sr. No	Course Code	Course Name	Teaching Scheme (hours/week)				Examination Scheme			
			L	T	P	C	Duration Hours	Component Weightage		
							SEE	CE	LPW	SEE
1		Data Structures	2	-	2	3	3	0.3	0.3	0.4
2		Object Oriented Programming	2	-	2	3	3	0.3	0.3	0.4
3		Digital Electronics	2	-	2	3	3	0.3	0.3	0.4
4		Mathematical Foundations for Computer Science	2	1	-	3	3	0.6	-	0.4
5		Economics	2	1	-	3	3	0.6	-	0.4
6		Indian Constitution and Citizenship	2	1	-	3	3	0.6	-	0.4
7		Internship-Community Services	-	-	-	3	-	1.0	-	-
Total			12	3	6	21				

L: Lectures, P/T: Practicals / Tutorial, C: Credits
LPW/PW: Laboratory / Project Work

SEE: Semester End Examination
CE: Continuous Evaluation

B. TECH. SEMESTER – IV
(B. Tech. Artificial Intelligence and Machine Learning)

w.e.f A. Y. 2025-26

Sr. No	Course Code	Course Name	Teaching Scheme (hours/week)				Examination Scheme			
			L	T	P	C	Duration Hours	Component Weightage		
							SEE	CE	LPW	SEE
1		Computer Architecture	2	1	-	3	3	0.6	-	0.4
2		Database Management Systems	2	-	2	3	3	0.3	0.3	0.4
3		Operating Systems	2	-	2	3	3	0.3	0.3	0.4
4		Machine Learning	2	-	2	3	3	0.3	0.3	0.4
5		Organizational Behavior	2	1	-	3	3	0.6	-	0.4
6		Design and Analysis of Algorithms	2	-	2	3	3	0.3	0.3	0.4
Total			12	02	8	18				

L: Lectures, P/T: Practicals / Tutorial, C: Credits
LPW/PW: Laboratory / Project Work

SEE: Semester End Examination
CE: Continuous Evaluation

B. TECH. SEMESTER – V
(B. Tech. Artificial Intelligence and Machine Learning)
w. e. f. Academic Year 2026-27

Course Code	Course Name	Teaching Scheme (hours/week)				Examination Scheme			
		L	T	P	C	Duration Hours	Component Weightage		
						SEE	CE	LPW	SEE
	Data Communication and Network	3	0	2	4	3	0.3	0.3	0.4
	Deep Learning	3	0	2	4	3	0.3	0.3	0.4
	Artificial Intelligence	3	0	2	4	3	0.3	0.3	0.4
	Department Elective-I	3	1	0	4	3	0.6	-	0.4
		3	0	2			0.3	0.3	0.4
		2	0	4			0.3	0.3	0.4
		2	1	2			0.3	0.3	0.4
	Computational Mathematics for AIML. (Specialization core)	3	1	0	4	3	0.6	-	0.4
		3	0	2			0.3	0.3	0.4
		2	0	4			0.3	0.3	0.4
		2	1	2			0.3	0.3	0.4
	Machine Learning operations. (Specialization core)	3	1	0	4	3	0.6	-	0.4
		3	0	2			0.3	0.3	0.4
		2	0	4			0.3	0.3	0.4
		2	1	2			0.3	0.3	0.4
	Total	-	-	-	24				

L: Lectures, P/T: Practicals / Tutorial, C: Credits
 LPW/PW: Laboratory / Project Work

SEE: Semester End Examination
 CE: Continuous Evaluation

Department Elective–I

Sr. No.	Course Code	Course Name	L	T	P	C
1.		Cloud Computing	3	0	2	4
2.		Systems, Biology and Medicines	3	0	2	4
3.		Reinforcement Learning	3	0	2	4
4.		Advanced Java	3	0	2	4
5.		Quantum Computing	3	0	2	4
6.		Advanced Computer Architecture	3	1	0	4
7.		AI for Data Mining/Analysis	3	0	2	4
8.		Generative AI	3	0	2	4

B. TECH. SEMESTER – VI
(B. Tech. Artificial Intelligence and Machine Learning)

w. e. f. Academic Year 2026-27

Course Code	Course Name	Teaching Scheme (hours/week)				Examination Scheme			
						Duration Hours	Component Weightage		
		L	T	P	C	SEE	CE	LPW	SEE
	Natural Language Computing (Specialization core)	3	0	2	4	3	0.3	0.3	0.4
	Software Engineering	3	0	2	4	3	0.3	0.3	0.4
	Research Methodology*	2	0	0	-	-	0.5	-	-
	Department Elective-II	3	1	0	4	3	0.6	-	0.4
		3	0	2			0.3	0.3	0.4
		2	0	4			0.3	0.3	0.4
		2	1	2			0.3	0.3	0.4
	Interdisciplinary Elective-I	3	1	0	4	3	0.6	-	0.4
		3	0	2			0.3	0.3	0.4
		2	0	4			0.3	0.3	0.4
		2	1	2			0.3	0.3	0.4
	Vision using Deep Learning (Specialization core)	3	1	0	4	3	0.6	-	0.4
		3	0	2			0.3	0.3	0.4
		2	0	4			0.3	0.3	0.4
		2	1	2			0.3	0.3	0.4
	Total	-	-	-	20				

*The course will be spread over two semesters (semester 6 and semester 7). 4 credits will be awarded on successful completion of examination components at the end of semester 7.

L: Lectures, P/T: Practicals / Tutorial, C: Credits
LPW/PW: Laboratory / Project Work

SEE: Semester End Examination
CE: Continuous Evaluation

Department Elective-II

Sr. No	Course Code	Course Name	L	T	P	C
1		Internet of Things	3	0	2	4
2		UI-UX Design	3	0	2	4
3		Contemporary Programming	3	0	2	4
4		Mobile Application Development	3	0	2	4
5		Advanced Machine Learning	3	0	2	4
6		Embedded Computing	3	0	2	4
7		Principles of Compiler Design	3	0	2	4
8		AI for Edge Computing & Applications	3	0	2	4

w.e.f. for first year students admitted in 2024-25 and D to D students admitted in 2025-26 onwards

B. TECH. SEMESTER – VII
(B. Tech. Artificial Intelligence and Machine Learning)

w. e. f. Academic Year 2027-28

Course Code	Course Name	Teaching Scheme (hours/week)				Examination Scheme			
						Duration Hours		Component Weightage	
		L	T	P	C	SEE	CE	LPW	SEE
	Ethics for AI	3	0	2	4	3	0.3	0.3	0.4
	Research Methodology*	0	0	4	4	-	-	0.5	-
	Department Elective-III	3	1	0	4	3	0.6	-	0.4
		3	0	2			0.3	0.3	0.4
		2	0	4			0.3	0.3	0.4
		2	1	2			0.3	0.3	0.4
	Department Elective-IV	3	1	0	4	3	0.6	-	0.4
		3	0	2			0.3	0.3	0.4
		2	0	4			0.3	0.3	0.4
		2	1	2			0.3	0.3	0.4
	Interdisciplinary Elective-II	3	1	0	4	3	0.6	-	0.4
		3	0	2			0.3	0.3	0.4
		2	0	4			0.3	0.3	0.4
		2	1	2			0.3	0.3	0.4
	Total	-	-	-	20				
Internship									
	Summer Internship**	-	-	-	6				

*The course will be spread over two semesters (semester 6 and semester 7). 4 credits will be awarded on successful completion of examination components at the end of semester 7.

**Compulsory Summer Internship of 6 weeks duration in summer break between Semester VI and VII

Department Elective–III

Sr. No	Course Code	Course Name	L	T	P	C
1		Machine Translation	3	0	2	4
2		Information Retrieval Systems	3	0	2	4
3		Soft computing	3	0	2	4
4		Federated Learning	3	0	2	4
5		Explainable AI	3	0	2	4
6		Securing AI Models	3	0	2	4
7		Programming for Modern Databases	3	0	2	4
8		High Performance Computing	3	0	2	4

Department Elective-IV

Sr. No	Course Code	Course Name	L	T	P	C
1		Social and Multimedia Analytics	3	0	2	4
2		Blockchain Technology	3	0	2	4
3		Analytics of IoT	3	0	2	4
4		Environmental Data Analytics	3	0	2	4
5		Artificial Intelligence for Medical Image Analysis	3	0	2	4
6		Video Analytics	3	0	2	4
7		Predictive Analytics	3	0	2	4

w.e.f. for first year students admitted in 2024-25 and D to D students admitted in 2025-26 onwards

The courses which are also part of B Tech CSE are highlighted in Grey in Department elective list, other courses are added exclusively for B Tech ALML.

Interdisciplinary electives(I & II) will allow students in this program to choose courses from other BTech disciplines like mechanical, Bio-technology etc.

SEMESTER – VIII**(B. Tech. Artificial Intelligence and Machine Learning)****w. e. f. Academic Year 2027-28**

Sr. No.	Course Code	Course Name	Teaching Scheme (hours/week)				Examination Scheme			
							Duration Hours		Component Weightage	
			L	T	P	C	SEE	CE	LPW	SEE
1		Internship/ Major Project	-	-	-	12	-	-	1.0	-
Total Credits=12										

w.e.f. for first year students admitted in 2024-25 and D to D students admitted in 2025-26 onwards