SCHOOL OF INFORMATION TECHNOLOGY
Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal
New Scheme of Examination as per AICTE Flexible Curricula
Computer Science and Engineering (Artificial Intelligence and Machine Learning)
B.Tech I Semester

(w.e.f. July, 2022)

S. No.	Subject Code	Subject Name	Theory End Sem.	Theory Mid Sem.	Theory Quiz/ Assignment	Practical End Sem.	Practical Lab work & Sessional	Total Marks	L	T	P	Total Credits
			Maximum Marks Allotted						Contact Hours per week			
Mandatory Induction Program (First three weeks)			Physical Activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visits to local Areas, Familiarization to Dept./Branch & Innovations									
Fourth week onwards classes will start												
1.	AL101	Mathematical Concepts For AI	70	20	10	-	-	100	3	1	-	4
2.	AL102	Basic Computer Engineering	70	20	10	30	20	150	3	-	2	4
3.	AL103	Principles of Electronics	70	20	10	30	20	150	2	-	2	3
4.	AL104	Fundamentals of Physics	70	20	10	30	20	150	2	-	2	3
5.	AL105	Communication Skills	70	20	10	30	20	150	3	-	2	4
6.	AL106	Computer Programming I (C Language)	-	-	-	15	10	25	-	-	2	1
7.	AL107	Internship-I (60 Hrs Duration) at the Institute level	To be completed during or at the end of the first/second semester. Its evaluation/credit to be added in third semester.									
8.	AL108	Swachh Bharat Summer Internship Unnat Bharat Abhiyan (100Hrs)/ Rural Outreach	-	-	-	15	10	25	-	-	4	2
		Total	**350**	**100**	**50**	**150**	**100**	**750**	**13**	**1**	**14**	**21**

* MST: Minimum of two mid semester tests to be conducted.

* Students can earn additional credits from the University recognized MOOC courses.

1 Hr Lecture(L)	1 Hr Tutorial(T)	2 Hr Practical(P)
1 Credit	1 Credit	1 Credit

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B.Tech II Semester

(w.e.f. Jan 2023)

S.No.	Subject Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits
			Theory Slot			Practical Slot						
			End Sem.	Mid Sem Exam.	Quiz/ Assignment	End Sem.	Lab work & Sessional		L	T	P	
1.	AL201	Discrete Structures	70	20	10	-	-	100	3	1	-	4
2.	AL202	Statistical Methods	70	20	10	-	-	100	3	-	-	3
3.	AL203	Digital Logic Design	70	20	10	30	20	150	3	-	2	4
4.	AL204	Object Oriented Programming	70	20	10	30	20	150	3	-	2	4
5.	AL205	Introduction to Artificial Intelligence	70	20	10	-	-	100	3	1	-	4
6.	AL206	Computer Programming II (C++)	-	-	-	30	20	50	-	-	4	2
7.	AL107	Internship-I (60 Hrs Duration) at the Institute level	To be completed during or at the end of the first/second semester. Its evaluation/credit to be added in third semester.									
		Total	**350**	**100**	**50**	**90**	**60**	**650**	**15**	**2**	**8**	**21**

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1 Hr Lecture(L)	1 Hr Tutorial(T)	2 Hr Practical(P)
1 Credit	1 Credit	1 Credit

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B.Tech III Semester

(w.e.f. July, 2023)

S.No.	Subject Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits
			Theory			Practical						
			End Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem	Term work — Lab Work & Sessional		L	T	P	
1.	AL301	Design Thinking	70	20	10	-	-	100	3	1	-	4
2.	AL302	Computer Organization and Architecture	70	20	10	-	-	100	3	1	-	4
3.	AL303	Data Structures and Algorithms	70	20	10	30	20	150	3	-	2	4
4.	AL304	Database Management Systems	70	20	10	30	20	150	3	-	2	4
5.	AL305	Introduction to Machine Learning	70	20	10	30	20	150	3	-	2	4
6.	AL306	Computer Programming III (Python)	-	-	-	30	20	50	-	-	4	2
7.	AL107	Evaluation of Internship-I completed at I year level	-	-	-	-	50	50	-	-	4	2
8.	AL307	Internship-II 90 hrs Internship based on using various software.	To be completed during or at the end of the third/fourth semester. Its evaluation/credit to be added in fifth semester.									
		Total	**350**	**100**	**50**	**120**	**130**	**750**	**15**	**2**	**14**	**24**
		NSS/NCC										

* MST: Minimum of two mid semester tests to be conducted.

* Students can earn additional credits from the University recognized MOOC courses.

1 Hr Lecture(L)	1 Hr Tutorial(T)	2 Hr Practical(P)
1 Credit	1 Credit	1 Credit

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B.Tech IV Semester
(w.e.f. Jan, 2024)

S. No.	Subject Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits
			Theory			Practical						
			End Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem.	Term work — Lab Work & Sessional		L	T	P	
1.	AL401	Theory of Computation	70	20	10	-	-	100	3	1	-	4
2.	AL402	Operating Systems	70	20	10	30	20	150	4	-	2	5
3.	AL403	Analysis & Design of Algorithms	70	20	10	30	20	150	4	-	2	5
4.	AL404	Software Engineering	70	20	10	30	20	150	3	-	2	4
5.	AL405	Cloud Computing	70	20	10	-	-	100	3	1	-	4
6.	AL406	Computer Programming IV (Java)	-	-	-	30	20	50	-	-	4	2
7.	AL307	Internship-II 90 hrs Internship based on using various software.	To be completed during or at the end of the third/fourth semester. Its evaluation/credit to be added in fifth semester.									
		Total	**350**	**100**	**50**	**120**	**80**	**700**	**17**	**2**	**10**	**24**
8.	AL407	Indian Knowledge System	**Non-credit course**									
		NSS/NCC										

* MST: Minimum of two mid semester tests to be conducted.

* Students can earn additional credits from the University recognized MOOC courses.

1 Hr Lecture(L)	1 Hr Tutorial(T)	2 Hr Practical(P)
1 Credit	1 Credit	1 Credit

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B.Tech V Semester

w.e.f. July 2024

S.No.	Subject Code	Subject Name	Theory			Practical		Total Marks	Contact Hours per week			Total Credits
			EndSem	Mid Sem. Exam.	Quiz/ Assignment	End Sem	Term work — Lab Work & Sessional		L	T	P	
1.	AL501	Soft Computing	70	20	10	-	-	100	3	1	-	4
2.	AL502	Compiler Design	70	20	10	30	20	150	3	-	2	4
3.	AL503	Pattern Recognition	70	20	10	30	20	150	3	-	2	4
4.	AL504	Contemporary Developments in AI	70	20	10	-	-	100	3	1	-	4
5.	AL505	Departmental Elective-I	70	20	10	30	20	150	3	-	2	4
6.	AL506	Minor Project-I	-	-	-	-	50	50	-	-	4	2
7.	AL307	Evaluation of Internship-II completed at II year level	-	-	-	-	100	100	-	-	6	3
8.	AL507	Internship-III 90 hrs Internship based on using various software.	**To be completed during or at the end of the fifth/sixth semester. Its evaluation/credit to be added in seventh semester.**									
		Total	**350**	**100**	**50**	**90**	**210**	**800**	**15**	**2**	**16**	**25**

* MST: Minimum of two mid semester tests to be conducted.

* Students can earn additional credits from the University recognized MOOC courses.

1 Hr Lecture(L)	1 Hr Tutorial(T)	2 Hr Practical(P)
1 Credit	1 Credit	1 Credit

Departmental Elective-I
AL505(A) Advanced Web Technology
AL505(B) Intelligent Systems for Robotics
AL505(C) Computational Intelligence

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B.Tech VI Semester
w.e.f. Jan 2025

S.No.	Subject Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits
			Theory			Practical						
			EndSem	Mid Sem. Exam.	Quiz/ Assignment	End Sem	Term work Lab Work & Sessional		L	T	P	
1.	AL601	Computer Networks	70	20	10	-	-	100	3	1	-	4
2.	AL602	Deep Learning	70	20	10	30	20	150	3	-	2	4
3.	AL603	Data Handling and Visualization	70	20	10	30	20	150	3	-	2	4
4.	AL604	Cyber and Information Security	70	20	10	-	-	100	3	1	-	4
5.	AL605	Departmental Elective-II	70	20	10	30	20	150	3	-	2	4
6.	AL606	Minor Project-II	-	-	-	50	50	100	-	-	6	3
7.	AL507	Internship -III 90 hrs Internship based on using various software.	To be completed during or at the end of the fifth/sixth semester. Its evaluation/credit to be added in seventh semester.									
		Total	350	100	50	140	110	750	15	2	12	23

* MST: Minimum of two mid semester tests to be conducted.

* Students can earn additional credits from the University recognized MOOC courses.

1 Hr Lecture(L)	1 Hr Tutorial(T)	2 Hr Practical(P)
1 Credit	1 Credit	1 Credit

Departmental Elective-II
AL605(A) Introduction to IoT
AL605(B) Data Mining And Warehousing
AL605(C) Computer Graphics & Multimedia

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w.e.f. July 2025

S.No.	Subject Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits
			Theory			Practical						
							Term work					
			EndSem	Mid Sem. Exam.	Quiz/ Assignment	End Sem	Lab Work & Sessional		L	T	P	
1.	AL701	**Reinforcement Learning**	70	20	10	30	20	150	3	-	2	4
2.	AL702	**Optimization Techniques**	70	20	10	-	-	100	3	1	-	4
3.	AL703	**Departmental Elective-III**	70	20	10	30	20	150	3	-	2	4
4.	AL704	**Departmental Elective-IV**	70	20	10	30	20	150	3	-	2	4
5.	AL705	**Major Project-I**	-	-	-	100	50	150	-	-	8	4
6.	AL507	**Evaluation of Internship-III completed at III year level**	-	-	-	-	100	100	-	-	6	3
		Total	**280**	**80**	**40**	**190**	**210**	**800**	**12**	**1**	**20**	**23**

* MST: Minimum of two mid semester tests to be conducted.

* Students can earn additional credits from the University recognized MOOC courses.

1 Hr Lecture(L)	1 Hr Tutorial(T)	2 Hr Practical(P)
1 Credit	1 Credit	1 Credit

Departmental Elective-III	Departmental Elective-IV
AL703(A) Natural Language Processing	**AL704(A)** Game Theory with Engineering Applications
AL703(B) Conversational AI	**AL704(B)** Predictive Analytics
AL703(C) Mobile Application Development	**AL704(C)** Augmented and Virtual Reality

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B.Tech VIII Semester

w.e.f. Jan 2026

S.No.	Subject Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits
			Theory			Practical						
							Term work					
			EndSem	Mid Sem. Exam.	Quiz/ Assignment	End Sem	Lab Work & Sessional		L	T	P	
1.	AL801	AI Ethics and IPR	70	20	10	-	-	100	3	1	-	4
2.	AL802	Departmental Elective-V	70	20	10	30	20	150	3	1	2	5
3.	AL803	Departmental Elective-VI	70	20	10	30	20	150	3	1	2	5
4.	AL804	Major Project-II	-	-	-	100	50	150	-	-	10	5
		Total	210	60	30	160	90	550	9	3	14	19

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* Students can earn additional credits from the University recognized MOOC courses.

1 Hr Lecture(L)	1 Hr Tutorial(T)	2 Hr Practical(P)
1 Credit	1 Credit	1 Credit

Departmental Elective-V	Departmental Elective-VI
AL802(A) Image Processing & Computer Vision	AL803(A) AI for Remote Sensing
AL802(B) Quantum Computing	AL803(B) Block Chain Technologies
AL802(C) Managing Innovation and Entrepreneurship	AL803(C) Information Retrieval
AL802(D) User Centric Computing for Human Computer Interaction	AL803(D) Edge Computing