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

(w.e.f. July, 2022)

S. No.	Subject Code	Subject Name	Maximum Marks Allotted					Total Marks	Contact Hours per week			Total Credits
			Theory			Practical						
			End Sem.	Mid Sem.	Quiz/ Assignment	End Sem.	Lab work & Sessional		L	T	P	
		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.	CD101	Introductory Topics in Statistics, Probability and Calculus	70	20	10	-	-	100	3	1	-	4
2.	CD102	Basic Computer Engineering	70	20	10	30	20	150	3	-	2	4
3.	CD103	Principles of Electronics	70	20	10	30	20	150	2	-	2	3
4.	CD104	Fundamentals of Physics	70	20	10	30	20	150	2	-	2	3
5.	CD105	Communication Skills	70	20	10	30	20	150	3	-	2	4
6.	CD106	Computer Programming I (C Language)	-	-	-	15	10	25	-	-	2	1
7.	CD107	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.	CD108	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

SCHOOL OF INFORMATION TECHNOLOGY
Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal
New Scheme of Examination as per AICTE Flexible Curricula
Computer Science and Engineering (Data Science)
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.	CD201	Discrete Structures	70	20	10	-	-	100	3	1	-	4
2.	CD202	Statistical Methods	70	20	10	-	-	100	3	-	-	3
3.	CD203	Digital Logic Design	70	20	10	30	20	150	3	-	2	4
4.	CD204	Object Oriented Programming	70	20	10	30	20	150	3	-	2	4
5.	CD205	Introduction to Data Analytics	70	20	10	-	-	100	3	1	-	4
6.	CD206	Computer Programming II (C++)	-	-	-	30	20	50	-	-	4	2
7.	CD107	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**

* 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

SCHOOL OF INFORMATION TECHNOLOGY
Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal
New Scheme of Examination as per AICTE Flexible Curricula
Computer Science and Engineering (Data Science)
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.	CD301	Design Thinking	70	20	10	-	-	100	3	1	-	4
2.	CD302	Computer Organization and Architecture	70	20	10	-	-	100	3	1	-	4
3.	CD303	Data Structures and Algorithms	70	20	10	30	20	150	3	-	2	4
4.	CD304	Database Management Systems	70	20	10	30	20	150	3	-	2	4
5.	CD305	Introduction to Data Science	70	20	10	30	20	150	3	-	2	4
6.	CD306	Computer Programming III (Python)	-	-	-	30	20	50	-	-	4	2
7.	CD107	Evaluation of Internship-I completed at I year level	-	-	-	-	50	50			4	2
8.	CD307	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

SCHOOL OF INFORMATION TECHNOLOGY
Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal
New Scheme of Examination as per AICTE Flexible Curricula
Computer Science and Engineering (Data Science)
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			L	T	P	
			End Sem.	Mid Sem. Exam.	Quiz/ Assignment	End Sem.	Term work					
							Lab Work & Sessional					
1.	CD401	Theory of Computation	70	20	10	-	-	100	3	1	-	4
2.	CD402	Operating Systems	70	20	10	30	20	150	4	-	2	5
3.	CD403	Analysis & Design of Algorithms	70	20	10	30	20	150	4	-	2	5
4.	CD404	Software Engineering	70	20	10	30	20	150	3	-	2	4
5.	CD405	Data Mining And Warehousing	70	20	10	-	-	100	3	1	-	4
6.	CD406	Computer Programming IV (Java)	-	-	-	30	20	50	-	-	4	2
7.	CD307	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.	CD407	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

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

w.e.f. July 2024

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.	CD501	Computational Mathematics	70	20	10	-	-	100	3	1	-	4
2.	CD502	Compiler Design	70	20	10	30	20	150	3	-	2	4
3.	CD503	Cloud Computing	70	20	10	30	20	150	3	-	2	4
4.	CD504	Artificial Intelligence	70	20	10	-	-	100	3	1	-	4
5.	CD505	Departmental Elective-I	70	20	10	30	20	150	3	-	2	4
6.	CD506	Minor Project-I	-	-	-	-	50	50	-	-	4	2
7.	CD307	Evaluation of Internship-II completed at II year level	-	-	-	-	100	100	-	-	6	3
8.	CD507	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
CD505(A) Advanced Web Technology
CD505(B) Introduction to Toolkits for Data Science
CD505(C) Computational Intelligence

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.	CD601	Computer Networks	70	20	10	-	-	100	3	1		4
2.	CD602	Machine Learning for Data Science	70	20	10	30	20	150	3	-	2	4
3.	CD603	Data Handling and Visualization	70	20	10	30	20	150	3	-	2	4
4.	CD604	Cyber and Information Security	70	20	10	-	-	100	3	1	-	4
5.	CD605	Departmental Elective-II	70	20	10	30	20	150	3	-	2	4
6.	CD606	Minor Project-II	-	-	-	50	50	100	-	-	6	3
7.	CD507	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
CD605(A) Introduction to IoT
CD605(B) Robotics and Embedded Systems
CD605(C) Computer Graphics & Multimedia

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

w.e.f. July 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.	CD701	Big Data Analytics	70	20	10	30	20	150	3	-	2	4
2.	CD702	Pattern Recognition	70	20	10	-	-	100	3	1	-	4
3.	CD703	Departmental Elective-III	70	20	10	30	20	150	3	-	2	4
4.	CD704	Departmental Elective-IV	70	20	10	30	20	150	3	-	2	4
5.	CD705	Major Project-I	-	-	-	100	50	150	-	-	8	4
6.	CD507	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
CD703(A) Natural Language Processing	CD704(A) Deep Learning
CD703(B) Software Architecture	CD704(B) Predictive Analysis
CD703(C) Mobile Application Development	CD704(C) Management Information System

SCHOOL OF INFORMATION TECHNOLOGY
Rajiv Gandhi Proudyogiki Vishwavidyalaya, Bhopal
New Scheme of Examination as per AICTE Flexible Curricula
Computer Science and Engineering (Data Science)
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						
			EndSem	Mid Sem. Exam.	Quiz/ Assignment	End Sem	Term work Lab Work & Sessional		L	T	P	
1.	CD801	AI Ethics and IPR	70	20	10	-	-	100	3	1	-	4
2.	CD802	Departmental Elective-V	70	20	10	30	20	150	3	1	2	5
3.	CD803	Departmental Elective-VI	70	20	10	30	20	150	3	1	2	5
4.	CD804	Major Project-II	-	-	-	100	50	150	-	-	10	5
		Total	210	60	30	160	90	550	9	3	14	19

* 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-V	Departmental Elective-VI
CD802(A) Image Processing & Computer Vision	**CD803(A)** DevOps and Cloud Automation
CD802(B) Business Intelligence	**CD803(B)** Block Chain Technologies
CD802(C) Managing Innovation and Entrepreneurship	**CD803(C)** Information Retrieval
CD802(D) User-Centric Computing For Human-Computer Interaction	**CD803(D)** Edge Computing