Bachelor of Computer Applications
(Data Science & Machine Learning) (BCA-DS & ML) (786)

Introduction

The Programme Bachelor of Computer Applications aims to provide strong knowledge of computer fundamentals, programming basics, logical and numerical methods, networking and internet, database and applications packages.

Objectives

- To disseminate the advance knowledge in Information Technology.
- To develop core competencies in Computer Applications.
- To create efficient professionals in IT industries.

Opportunities

1. In IT as a Software Professional
2. Software / Hardware / Technical Support in Multi-National Companies
3. Can run own Business for Hardware/Technical support
4. In Teaching Field
5. As Web Designer / Developer
6. Software Testing
7. Higher Education - MCA / MSC / MBA / Other PG Qualification

Duration	:	3 years + 1 years (Hon.) (Eight Semesters)
Eligibility	:	12^{th} passed with minimum 55% marks or its equivalent & Clearance in the Entrance examination (MHB-CET/TMV CET) and Mathematics is Compulsory
Student Intake	:	60
Medium of Instruction	:	English
Evaluation	:	Internal Assessment 40 %, External Assessment 60 %, Passing 40 %. (Separate passing in both Internal and External Assessment is mandatory)
Pattern	:	Semester Pattern

Fee Structure for the academic year 2026-27 :

Academic Year	Eligibility	Admission	Examination	Tuition	Laboratory / Practical	Library	Total
First Year	1,000	3,000	4,000	51,000	25,500	500	**85,000**
Second Year	-	3,000	4,000	53,000	27,500	500	**88,000**
Third Year	-	3,000	4,000	55,000	29,000	500	**91,500**
Honours	-	3,000	4,000	55,500	30,000	500	**93,000**

Library Deposit 2000/-

Caution Deposit 5000/-
Late Admission fee 1500/- After 31st August, 2026

COURSE STRUCTURE BCA-DS & ML (786)

As per U.G.C. norms Choice Based Credit System is implemented from the academic year 2015-16 Details are available with the department.

Semester - I

Sr. No.	Course Code	Course Name	Category	Credit		Theory Marks		Practical Marks		Total Marks
				Theory	Practical	Internal	External	Internal	External	
1	78625-101	C Programming	Core	3	-	40	60	-	-	100
2	78625-102	Mathematics	Core	4	-	40	60	-	-	100
3	78625-103	Computer & Network Fundamentals	DSC	3	-	40	60	-	-	100
4	78625-104	Operating System	DSC	3	-	40	60	-	-	100
5	78625-105	English	AECC	2	-	20	30	-	-	50
	OR	OR								
	78625-106	Japanese - I								
6	VAC105	Nitishataka Purvardha (Marathi)	Open Elective	2	-	50	-	-	-	50
	OR	OR								
	VAC109	Gender Perspectives								
7	SEC301	Advanced Excel	Skill Enhancement Course	2	-	50	-	-	-	50
8	78625-108	C Programming (PR)	Core-LAB	-	1	-	-	20	30	50
Total Courses 8				**20**		**250**	**300**	**20**	**30**	**600**

Semester - II

Sr. No.	Course Code	Course Name	Category	Credit +		Theory Marks		Practical Marks		Total Marks
				Theory	Practical	Internal	External	Internal	External	
1	78625-201	Python Programming	Core	3	-	40	60	-	-	100
2	78625-202	Statistics	Core	4	-	40	60	-	-	100
3	78625-203	Structured System Analysis and Design	DSC	3	-	40	60	-	-	100
4	78625-204	Data Mining	Core	3	-	40	60	-	-	100
5	78625-205	Marathi	AECC	2	-	20	30	-	-	50
	OR	OR								
	78625-208	Japanese - II								
6	46425-206	Yoga	Open Elective	2	2	-	-	20	30	50
	OR	OR								
	VAC207	Nitishataka Uttarardha (Marathi)			-	50	-	-	-	
	OR	OR				50	-	-	-	
	VAC110	Geeta Rahasya		2						
7	IKS24	Indian Knowledge System - Generic	IKS-Generic	2	-	50	-	-	-	50
8	78625-207	Python Programming (PR)	Core-Lab	-	1	-	-	20	30	50
Total Courses 8				**20**		**230**	**270**	**20**	**30**	**600**

Semester - III

Sr. No.	Course Code	Course Name	Category	Credit		Theory Marks		Practical Marks		Total Marks
				Theory	Practical	Internal	External	Internal	External	
1	78625-301	Advanced Web Designing	Core	3	-	40	60	-	-	100
2	78625-302	Database Management System (DBMS)	Core	3	-	40	60	-	-	100
3	78625-303	Environmental Studies	Value Added Course	4	-	100	-	-	-	100
4	78625-304	Exploratory Data Analysis (EDA)	DSC	2	-	20	30	-	-	50
5	78625-305	Communication Skills	AECC	2	-	20	30	-	-	50
6	78625-307	Machine Learning Foundation	DSC	2	-	20	30	-	-	50
7	78625-308	Data Visualisation	DSC	2	-	20	30	-	-	50
8	78625-309	Advanced Web Designing (PR)	Core-Lab	-	1	-	-	20	30	50
9	78625-310	Data Visualisation	DSC - Lab	-	1	-	-	20	30	50
Total Courses 9				**20**		**260**	**240**	**40**	**60**	**600**

Semester - IV

Sr. No.	Course Code	Course Name	Category	Credit		Theory Marks		Practical Marks		Total Marks
				Theory	Practical	Internal	External	Internal	External	
1	78625-401	Advanced Database Management System	Core	3	-	40	60	-	-	100
2	78625-402	Java Programming	Core	3	-	40	60	-	-	100
3	78625-403	Power Bi	DSC	3	-	40	60	-	-	100
4	78625-404	Unified Modeling Language (UML)	DSC	3	-	40	60	-	-	100
5	78625-405	Soft Skills	Open Elective	2	-	20	30	-	-	50
	OR	OR								
	78625-410	Content Writing & Technical Writing								
6	78625-406	Bigdata Technologies	Value Added Course	2	-	20	30	-	-	50
7	78625-407	Indian Knowledge System - Computer Science	IKS-DSC	2	-	50	-	-	-	50
8	78625-408	Java Programming (PR)	Core-Lab	-	1	-	-	20	30	50
9	78625-409	Advanced Database Management System (PR)	Core-Lab	-	1	-	-	20	30	50
Total Courses 9				**20**		**240**	**210**	**40**	**60**	**650**

Semester - V

Sr. No.	Course Code	Course Name	Category	Credit		Theory Marks		Practical Marks		Total Marks
				Theory	Practical	Internal	External	Internal	External	
1	78625-501	Machine Learning - I (Model building)	Core	3	-	40	60	-	-	100
2	78625-502	Natural Language Processing NLP	Core	3	-	40	60	-	-	100
3	78625-503	Internet of Things	DSC	3	-	40	60	-	-	100
4	78625-504	Introduction to Artificial Intelligence	DSC	3	-	40	60	-	-	100
5	78625-505	Business Communication	Inter disciplinary	3	-	40	60	-	-	100
6	78625-506	Business Forcasting	Multi disciplinary	3	-	40	60	-	-	100
	OR	OR								
	78625-507	Digital Marketing with Data Analytics								
7	78625-508	Machine Learning - I (Model building) (PR)	Core-Lab	-	1	-	-	20	30	50
8	78625-509	Natural Language Processing NLP (PR)	Core-Lab	-	1	-	-	20	30	50
Total Courses 8				**20**		**240**	**360**	**40**	**60**	**700**

Semester - VI

Sr. No.	Course Code	Course Name	Category	Credit		Theory Marks		Practical Marks		Total Marks
				Theory	Practical	Internal	External	Internal	External	
1	78625-601	Machine Learning - II (MLOps & Model Development)	Core	3	-	40	60	-	-	100
2	78625-602	Deep Learning	Core	3	-	40	60	-	-	100
3	78625-603	Cloud Technology & Security	DSC	2	-	20	30	-	-	50
4	78625-604	Project	Core	-	6	-	-	60	90	150
5	78625-605	Internship	Internship	-	4	-	-	100	-	100
6	78625-606	Machine Learning - II (MLOps & Model Development) (PR)	Core-Lab	-	1	-	-	20	30	50
7	78625-607	Deep Learning (PR)	Core-Lab	-	1	-	-	20	30	50
Total Courses 7				**20**		**100**	**150**	**200**	**150**	**600**

Semester - VII

Sr. No.	Course Code	Course Name	Category	Credit		Theory Marks		Practical Marks		Total Marks
				Theory	Practical	Internal	External	Internal	External	
1	78625-701	Advanced C Programming and Data Structure	Core	3	-	40	60	-	-	100
2	78625-702	Green Computing	DSC	3	-	40	60	-	-	100
3	78625-703	Discrete Mathematics	Core	3	-	40	60	-	-	100
4	78625-704	Data Engineering and Pipleline	Core	3	-	40	60	-	-	100
5	78625-705	Cloud Computing using AWS & Azure	DSC	3	-	40	60	-	-	100
6	78625-706	Research Methodology	DSC	4	-	40	60	-	-	100
7	78625-707	MOOC - I	MOOC	1	-	50	-	-	-	50
8	78625-708	Advanced C Programming and Data Structure (PR)	Core-LAB	-	1	-	-	20	30	50
9	78625-709	Data Engineering and Pipleline (PR)	DSC-LAB	-	1	-	-	20	30	50
Total Courses 9				**22**		**290**	**360**	**40**	**60**	**750**

Semester - VIII

Sr. No.	Course Code	Course Name	Category	Credit		Theory Marks		Practical Marks		Total Marks
				Theory	Practical	Internal	External	Internal	External	
1	78625-801	Deep Learning & Neural Network	Core	3	-	40	60	-	-	100
2	78625-802	Agents in AI	Core	3	-	40	60	-	-	100
3	78625-808	Full Stack Development	DSC	3	-	40	60	-	-	100
4	78625-804	Project	Core	-	6	-	-	80	120	200
5	78625-805	Internship	Internship	-	4	-	-	100	-	100
6	78625-806	MOOC - II	MOOC	2	-	50	-	-	-	50
7	78625-809	Full Stack Development (PR)	DSC-LAB	-	1	-	-	20	30	50
Total Courses 7				**22**		**170**	**180**	**200**	**150**	**700**