Bachelor of Computer Applications (Data Science and Machine Learning) (786)

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

Course Objectives

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

Eligibility : 12^{th} passed with minimum 55% marks or its equivalent & Clearance in the Entrance examination (MHB-CET/TMV CET)

Duration : 3 years + 1 years (Hon.) (Eight Semesters)

Student Intake : 60

Fee Structure for the academic year 2025-26 :

B.C.A. (Data Science and Machine Learning) (786)

Academic Year	Eligibility	Admission	Examination	Tuition	Laboratory / Practical	Library	PCP	Total
First Year	1,000	2,000	3,000	48,000	25,500	500	-	**80,000**
Second Year	-	2,000	3,000	50,000	27,500	500	-	**83,000**
Third Year	-	2,000	3,000	51,500	29,000	500	-	**86,000**
Honours	-	2,000	3,000	52,500	30,000	500	-	**88,000**

Library Deposit 2000/-

Caution Deposit 5000/-

Late admission fee 1500/- after 16^{th} Aug. 2025

Opportunities at exit point :

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

COURSE STRUCTURE

Semester - I

Course Code	Course Name	Category	Credit		Theory Marks		Practical Marks		Total Marks
			Theory	Practical	External	Internal	External	Internal	
78625-101	C Programming	Core	3	-	60	40	-	-	100
78625-102	Mathematics	Core	4	-	60	40	-	-	100
78625-103	Computer & Network Fundamentals	DSC	3	-	60	40	-	-	100
78625-104	Operating System	DSC	3	-	60	40	-	-	100
78625-105 78625-106	English OR Japanese - I	AECC	2	-	30	20	-	-	50
VAC105 VAC109	Nitishataka Purvardha (Marathi) OR Gender Perspectives	Open Elective	2	-	-	50	-	-	50
78625-107	Advanced Excel	Skill Enhance ment Course	2	-	30	20	-	-	50
78625-108	C Programming (PR)	Core-LAB	-	1	-	-	30	20	50
		Total	**20**						**600**

Semester - II

Course Code	Course Name	Category	Credit		Theory Marks		Practical Marks		Total Marks
			Theory	Practical	External	Internal	External	Internal	
78625-201	Python Programming	Core	3	-	60	40	-	-	100
78625-202	Statistics	Core	4	-	60	40	-	-	100
78625-203	Structured System Analysis and Design	DSC	3	-	60	40	-	-	100
78625-204	Data Mining	Core	3	-	60	40	-	-	100
78625-205	Communication Skills	AECC	2	-	30	20	-	-	50
78625-206 OR VAC207 OR VAC211	Yoga OR Nitishataka Uttarardha (Marathi) OR Moral Values	Open Elective	- 2 2	2 - -	- - -	- 50 50	30 - -	20 - -	50
IKS24	Indian Knowledge System (IKS)	IKS-Generic	2	-	-	50	-	-	50
78625-207	Python Programming(PR)	Core-Lab	-	1	-	-	30	20	50
		Total	**20**						**600**

Semester - III

Course Code	Course Name	Category	Credit		Theory Marks		Practical Marks		Total Marks
			Theory	Practical	External	Internal	External	Internal	
78625-301	Advanced Web Designing	Core	3	-	60	40	-	-	100
78625-302	Database Management System (DBMS)	Core	3	-	60	40	-	-	100
78625-303	Environmental Studies	Value Added Course	4	-	-	100	-	-	100
78625-304	Exploratory Data Analysis	DSC	2	-	30	20	-	-	50
78625-305	Marathi	AECC	2	-	30	20	-	-	50
OR	OR								
78625-306	Japanese - II								
78625-307	Machine Learning Foundation	DSC	2	-	30	20	-	-	50
78625-308	Data Visualisation	DSC	2	-	30	20	-	-	50
78625-309	Advanced Web Designing (PR)	Core-Lab	-	1	-	-	30	20	50
78625-310	Data Visualisation	DSC -Lab	-	1	-	-	30	20	50
		Total	**20**						**600**

Semester - IV

Course Code	Course Name	Category	Credit		Theory Marks		Practical Marks		Total Marks
			Theory	Practical	External	Internal	External	Internal	
78625-401	Advanced Database Management System	Core	3	-	60	40	-	-	100
78625-402	Java Programming	Core	3	-	60	40	-	-	100
78625-403	Power Bi	DSC	3	-	60	40	-	-	100
78625-404	Unified Modeling Language (UML)	DSC	3	-	60	40	-	-	100
78625-405	Soft Skills	Open Elective	2	-	-	50	-	-	50
OR	OR								
VAC403	Personality Development								
78625-406	Bigdata Technologies	Value Added Course	2	-	30	20	-	-	50
78625-407	Indian Knowledge System - Computer Science	IKS-DSC	2	-	-	50	-	-	50
78625-408	Java Programming (PR)	Core-Lab	-	1	-	-	30	20	50
78625-409	Advanced Database Management System (PR)	Core-Lab	-	1	-	-	30	20	50
		Total	**20**						**650**

Semester - V

Course Code	Course Name	Category	Credit		Theory Marks		Practical Marks		Total Marks
			Theory	Practical	External	Internal	External	Internal	
78625-501	Machine Learning - I (Model building)	Core	3	-	60	40	-	-	100
78625-502	Natural Language Processing NLP	Core	3	-	60	40	-	-	100
78625-503	Internet of Things	DSC	3	-	60	40	-	-	100
78625-504	Introduction to Artificial Intelligence	DSC	3	-	60	40	-	-	100
78625-505	Business Communication	Interdisciplinary	3	-	60	40	-	-	100
78625-506	Business Forcasting	Multidisciplinary	3	-	60	40	-	-	100
OR	OR								
78625-507	Digital Marketing with Data Analytics								
78625-508	Machine Learning - I (Model building) (PR)	Core-Lab	-	1	-	-	30	20	50
78625-509	Natural Language Processing NLP (PR)	Core-Lab	-	1	-	-	30	20	50
		Total	**20**						**700**

Semester - VI

Course Code	Course Name	Category	Credit		Theory Marks		Practical Marks		Total Marks
			Theory	Practical	External	Internal	External	Internal	
78625-601	Machine Learning - II (MLOps & Model Development)	Core	3	-	60	40	-	-	100
78625-602	Deep Learning	Core	3	-	60	40	-	-	100
78625-603	Cloud Technology & Security	DSC	2	-	30	20	-	-	50
78625-604	Project	Core	6	-	-	-	90	60	150
78625-605	Internship	Internship	4	-	-	-	-	100	100
78625-606	Machine Learning - II (MLOps & Model Development) (PR)	Core-Lab	-	1	-	-	30	20	50
78625-607	Deep Learning (PR)	Core-Lab	-	1	-	-	30	20	50
		Total	**20**						**600**

Semester - VII

Course Code	Course Name	Category	Credit		Theory Marks		Practical Marks		Total Marks
			Theory	Practical	External	Internal	External	Internal	
78625-701	Data Structure using python	Core	3	-	60	40	-	-	100
78625-702	Green Computing	DSC	3	-	60	40	-	-	100
78625-703	Discrete Mathematics	Core	3	-	60	40	-	-	100
78625-704	Data Engineering and Pipleline	Core	3	-	60	40	-	-	100
78625-705	Cloud Computing using AWS & Azure	DSC	3	-	60	40	-	-	100
78625-706	Research Methodology	DSC	4	-	60	40	-	-	100
78625-707	MOOC - I	MOOC	1	-	-	50	-	-	50
78625-708	Data Structure using python (PR)	Core-LAB	-	1	-	-	30	20	50
78625-709	Data Engineering and Pipleline (PR)	DSC-LAB	-	1	-	-	30	20	50
		Total	**22**						**750**

Semester - VIII

Course Code	Course Name	Category	Credit		Theory Marks		Practical Marks		Total Marks
			Theory	Practical	External	Internal	External	Internal	
78625-801	Deep Learning & Neural Network	Core	3	-	60	40	-	-	100
78625-802	Agents in AI	Core	3	-	60	40	-	-	100
78625-803	Django Web Framework	DSC	3	-	60	40	-	-	100
78625-804	Project	Core	-	6	-	-	120	80	200
78625-805	Internship	Internship	-	4	-	-	-	100	100
78625-806	MOOC - II	MOOC	2	-	-	100	-	-	100
78625-807	Django Web Framework (PR)	DSC-LAB	-	1	-	-	30	20	50
		Total	**22**						**750**