

BHARATHIAR UNIVERSITY, COIMBATORE-641 046

(For the students admitted from the academic year 2023-2024 onwards)

B.Sc. Data Science (CBCS pattern)

SCHEME OF EXAMINATIONS

Part	Study Components	Course Title	Ins. hrs / week(Theory)	Examinations				Credits
				Dur. Hrs.	CIA	End Sem Exam	Total	
SEMESTER –I								
I	Language-I		4	3	25	75	100	4
II	English-I		4	3	25	75	100	4
III	Core 1: Computer Fundamentals and Python Programming		5	3	25	75	100	4
III	Core 2: Database Management System with SQL		5	3	25	75	100	4
III	Core Lab 1: Python Programming & SQL Lab		5	3	25	75	100	4
III	Allied Paper I: Descriptive Statistics		5	3	25	25	50	4
IV	Environmental Studies #		2	3	-	50	50	2
		Total	30		150	450	600	26
SEMESTER –II								
I	Language-II		4	3	25	75	100	4
II	English-II		4	3	25	25	50	4
III	Core 3: Data Analytics		5	3	25	75	100	4
III	Core Lab 2: Advanced Excel Lab		4	3	25	75	100	4
III	Core Lab 3: Internet Basics Lab		4	3	20	30	50	2
III	Allied Paper II: Mathematical Foundations for Machine Learning		5	3	25	75	100	4
IV	Value Education – Human Rights #		2	3	-	50	50	2
	NaanMuthalvan - Skill Course Effective English http://kb.naanmudhalvan.in/images/c/c7/Cambridge_Course_Details.pdf		2	2	25	25	50	2
		Total	30		170	430	600	26
SEMESTER –III								
I	Language – III		4	3	25	75	100	4
II	English-III		4	3	25	75	100	4
III	Core 5: Data Engineering		4	3	25	75	100	3
III	Core 6: Artificial Intelligence		4	3	25	75	100	3
III	Core 7: Applied Data Structures		3	3	25	75	100	2
III	Core Lab 5: ETL Lab		3	3	20	30	50	2
III	Allied Paper III: Inferential Statistics		4	3	25	25	50	3

IV	Skill based Subject-1: Mini project using Python Programming / Advanced Excel	2	3	25	25	50	2
IV	Tamil @ / Advanced Tamil # (or) Non-Major Elective-I: Yoga for Human Excellence # / Women's Rights # Constitution of India #	2	3	-	50	50	2
	Total	30		195	505	700	25
SEMESTER –IV							
I	Language – IV	4	3	25	75	100	4
II	English-IV	4	3	25	25	50	4
III	Core 8: R Programming	3	3	25	75	100	4
III	Core 9: Machine Learning Techniques	4	3	25	75	100	4
III	Core Lab 6: R Programming Lab	3	3	20	30	50	2
III	Allied Paper IV: Digital Marketing	4	3	25	25	50	3
IV	Skill based Subject-2: Optimization Techniques	4	3	25	25	50	2
IV	Tamil @ / Advanced Tamil # (or) Non-major elective -II : General Awareness #	2	3	-	50	50	2
	NaanMuthalvan – Skill Course Office Fundamentals - Lab http://kb.naanmudhalvan.in/Bharathiar_University_(BU)	2	3	25	25	50	2
	Total	30		195	405	600	27
SEMESTER –V							
III	Core 10: Data Visualization	6	3	25	75	100	4
III	Core 11: Deep Learning	6	3	25	75	100	4
III	Core Lab 7: Data Visualization Lab	6	3	20	30	50	2
III	Elective–I:	6	3	25	75	100	3
IV	Skill based Subject-3: Social Media Analytics	6	3	25	25	50	2
	Total	30		120	280	400	15
SEMESTER –VI							
III	Core 12: Natural Language Processing	5	3	25	75	100	4
III	Core Lab 8: Natural Language Processing Lab	4	3	20	30	50	2
III	Core 13: Project Work Lab % %	6	3	25	75	100	4
III	Elective –II:	5	3	25	75	100	3
III	Elective –III:	5	3	25	75	100	3
IV	Skill based Subject-4: Capstone Project using Python or R Programming, Data Visualization Tools.	3	3	25	25	50	2
V	Extension Activities@	-	-	50		50	1
	Naan Muthalvan - Skill Course Cyber Security @ http://kb.naanmudhalvan.in/images/7/71/Cyber_security.pdf (or) Machine Learning # http://kb.naanmudhalvan.in/images/1/19/PBL_Google.pdf (or) Android APP Development \$ http://kb.naanmudhalvan.in/images/0/08/Android_App_Dev.pdf	2	2	25	25	50	2

	Total	30		220	380	600	21
	Grand Total			1050	2450	3500	140

No Continuous Internal Assessment (CIA). Only University Examinations. @ No University Examinations. Only Continuous Internal Assessment (CIA).

➤ #Govt – Non-Autonomous Colleges, \$ Aided – Non-Autonomous Colleges, @ Self - Financing Colleges (Non –Autonomous) (For theory : CIA – 12, CEE – 38; For Practical : CIA – 20, CEE – 30).

List of Elective Papers (Colleges can choose any one of the paper as electives)		
Elective – I	A	Marketing Analytics
	B	Data Security and Compliance
	C	Computer Vision
Elective – II	A	Supply Chain and Logistics Analytics
	B	Business and Financial Analytics
	C	Recommender system
Elective - III	A	HR Analytics
	B	Data Mining
	C	Big Data and Cloud Computing

