

## **GONDWANAUNIVERSITY, GADCHIROLI**

## **DIRECTION NO.13 of 2025**

Admission of Students and Conduct of Examinations Leading to the Award of Four Years Degree Program entitled "B.Sc. Data Science" under Credit System and As per NEP 2020 in the Faculty of Science & Technology, Direction 2025"

Whereas, The Maharashtra Public Universities Act, 2016 (Maharashtra Act No. VI of 2017) (hereinafter the "Act") governs the Gondwana University, Gadchiroli (hereinafter the "University");

#### AND

Whereas, the National Education Policy (NEP) 2020 focuses on education and skill development as per the needs of the community and as per Maharashtra State Government Resolution of Higher and Technical Education Department No. NEP-2020/Pr.kr.09/UE-3/SHIKANA, dated 20 April 2023, therefore, the University is introducing Four Years Degree Programme entitled "B.Sc. DataScience" under credit system and as per NEP2020 in the Faculty of Science & Technology and it will be offered by the Model Degree College, a constituent college of the University;

#### **AND**

Whereas, National Education Policy 2020 provides for Interdisciplinary and Multidisciplinary Skill-based courses featuring multiple entries and exit options;

#### AND

Whereas, section 22(1) of the UGC Act, 1956 states that the right of conferring or granting degrees shall be exercised only by a University established or incorporated by or under a Central Act, a Provincial Act or a State Act or an institution specially empowered by an Act of Parliament to confer or grant degrees & the Maharashtra government, through the Higher and Technical Education Department, issued a Government Resolution on August 7,2020, regarding the implementation of Apprenticeship Embedded Degree Programs in higher education institutions.

#### AND

**Whereas**, the University Grants commission has issued guidelines dated 29<sup>th</sup> July 2020, for Multiple Entry and Multiple Exit in Academic Programs offered in Higher Education Institutions through Formal system of Academic Bank of Credits (ABC);

### **AND**

Whereas, there is an exigency within the meaning of section 12(8) of the Act, necessitating the issuance of a Direction incorporating the provisions with regard to the award of Certificate / Diploma / Bachelor's Degree / Bachelor's Degree with Honours and its guidelines as stipulated in the University Grants Commission Act, 1956 and provided by National Education Policy 2020;

Whereas, as per provisions of section 73(1) of the Act, an ordinance is required to frame to lay down the conditions under which students can be admitted to courses of study for award of a Certificate but since, making of an ordinance is a time-consuming process, University had earlier issued Direction No. 30 of 2023 which is lapsed by virtue of proviso to section 12(8) of the Act and there is still an urgency for continuation of Four Years Degree Programme entitled "B. Sc. Data Science" under credit system and as per NEP 2020 in the Faculty of Science & Technology, therefore Direction No. 30 of 2023 needs to be revived with suitable modifications;

Now, therefore, I, Dr. Prashant Shridhar Bokare, Vice-Chancellor of the University, in exercise of my powers under section 12(8) of the Act, do hereby issue the following Directions.

- 1. This Direction shall be called Admission of Students and Conduct of Examinations Leading to the Award of Four Years Degree Program entitled "B.Sc. Data Science" under Credit System and As per NEP 2020 in the Faculty of Science & Technology, Direction 2025".
- 2. This direction shall come into force from the date of its issuance.
- **3.** Definitions:-In this Direction, unless the context requires otherwise, the words and phrases shall have the meaning given hereunder.
  - a) "Program" means the full-time Four Years Degree Programmed entitled "B. Sc. Data Science".
  - b) "Application Form" means a form prescribed by the University for seeking admission to Program under this direction.
  - c) "Competent Authority" means the Authority appointed by the Vice-Chancellor, for any specific purpose of the Program under this Direction.
  - d) "Course"means a subjector apaper of feredinary semester under this Program.
  - e) . "ATKT" means "Allowed to Keep Term" in the higher semester, as per the rules herein
  - f) "Credit" refers to the weightage given to a course, in terms of the number of instructional hours per semester assigned to it. In this direction one credit means 15 hours of teaching work or thirty hours of practical work in a semester.
  - g) "Credit System" means, the system in which weightage of credits is spread over to different semesters during the period of study.
  - h) 'Grade letter' is an index to indicate the performance of a student in particular course. It is the depiction of actual marks secured by a student by a letter, the Grade letters are as given in **Table 5.**
  - i) 'Grade point' is the weightage allotted to each grade letter depending on the range of marks awarded in a course.
  - j) "HSSC" means the Higher Secondary School Certificate (Standard XII) examination conducted by Maharashtra State Board of Secondary and Higher Secondary Education or its equivalent certificate awarded by any other recognized Board.
  - k) "Qualifying Examination" means an examination on the basis of which a candidate becomes eligible for admission to this Program.
  - 1) Pattern and Duration of the course/diploma/degree:
    - i. Certificate Course: One year (Two semesters)
    - ii. Advanced Diploma: Two years (Four semesters)
    - iii. Bachelor's Degree Course: Three Years (Six Semesters)
    - iv. Honour's Degree Course: Four Years (Eight Semesters)

- **4.** In order to conduct the admission process for admitting students to this Program, the Vice Chancellor shall appoint the "Competent Authority".
- **5.** Intake capacity, Eligibility for application, Admission fees, Curriculum, Examination fees for this Program will be as shown in Table 1 below:

Table: 1

Sr.No.	Subtitle	Details
1	IntakeCapacity	60
2	Eligibility for application	HSSCScience
3	Admission Fees	Admission fees shall be as prescribed/revised and notified from time to time by the University.
4	Curriculum	As specified in Annexure-I
5	Examination Fees	The Examination fees shall be as prescribed/revised and notified from time to time by the University.

#### 6. Objectives of the Program:-

- 1. Build strong foundations in mathematics, statistics, and computer science.
- 2. Learn programming languages like Python, R, and SQL for data analysis.
- 3. Handle and preprocess data from various sources (structured and unstructured).
- 4. Apply machine learning and statistical techniques to analyze data.
- 5. Develop data visualization and communication skills to present insights clearly.
- 6. Work on real-world projects and case studies across different industries.
- 7. Understand ethical, legal, and social issues in data science and responsible AI use.
- 7. Levels of Awards: The levels of awards shall lead to Certificate/Advanced Diploma/ Apprenticeship/Internship Embedded Degree/ Research Degree, B.Sc. (Data Science) in one or more vocational areas and will be offered under the aegis of the University.
- 8. The theory, practical, internship, field visits, and project work examinations of Semester-I, II, III, IV, V VI,VII and VIII shall be conducted by the University for the general education component and skill development component and shall be held separately at the end of each semester at such places and dates as may be decided by the University and shall be held as per the schedule given in Table below:

Table -2						
Sr.no	Name of Examination	Main Examination	Supplementary Examination			
	Semester I, III, V and	Winter/Summer	Summer/ winter			
	VII		2			
	Semester II, IV, VI, VIII	Summer/Winter	Winter/Summer			

## 9. EVALUATION OF THE PROGRAM

The internal and university assessment of student performance shall be carrying the weightage as mentioned in the Teaching and Examination Scheme given below:

# Table3: Teaching and Examination Scheme "B. Sc. Data Science" Teaching & Examination Scheme Semester-I & II

						anaUnive			11							
			-			.DataScien	ceSeme	ster-I								-
			Teach	hingSch	eme			TEL					D			
						Duration MaxMarks				MinPass	Duration		Practical MaxMarks		MinPass	Total
Sr.No	Subject	Credit	Th	Pr.	Total	Duration Hrs	UA	CA	Total	Marks	Hrs	UA	CA	Total	marks	Mark
1	Data structureandAlgorithms usingPython	4	4		4	3	80	20	100	40	3			0		100
2	Discrete Mathematics	2	4		4	2	40	10	50	20	2			0		50
3	Introduction toProgramming	2	4		4	2	40	10	50	20	2			0		50
4	WebTechnology	2	4		4	2	40	10	50	20	2			0		50
- 4	Business Communication&InformationEthics	2	4		4	2	40	10	50	20	2			0		50
(	Environment ProtectionLaw	2	2		2			50	50	20				0		50
7	Precalculus	2	2		2			50	50	20				0		50
8	LabcourseinWebTechnology	2		4	4		100					30	20	50	25	50
9	ICT Practical	2		4	4				0		- 1 - A	30	20	50	25	50
	Total	20	24	8	32		240	160	400		11	60	40	100	50	500
					Acad	vanaUnive	ion202	4-2025	li							
			Teacl	hing Scl	Acad		ion202	4-2025	li							
			Teach	hing Scl	Acad	lemicSess	ion202	4-2025					Practica	1		
			Teach	hing Scl	Acad	lemicSess	ion202	4-2025 ter-II Theory		MinPass	Duration		Practica Marks		MinPass	Total
Sr.No	Subject	Credit	Teacl	hing Sch	Acad	lemicSess .DataScienc	ion202 ceSemes	4-2025 ter-II Theory		MinPass Marks	Duration Hrs			l Total	MinPass marks	
Sr.No	Subject DatabaseManagementSystems	Credit 4			BSc neme	Duration	ion202 ceSemes Max	4-2025 ter-II Theory Marks	v			Max	Marks			
	3		Th		BSc neme Total	Duration Hrs	ion202 ceSemes Max I UA	ter-II Theory Marks CA	Total	Marks	Hrs	Max	Marks	Total		Marks
1	DatabaseManagementSystems	4	Th 4		BSc neme Total	Duration Hrs	Max I UA 80	Theory Marks CA 20	Total	Marks 40	Hrs 3	Max	Marks	Total 0		Marks 100 50 50
1	DatabaseManagementSystems R Programming	4 2	Th 4 4		BSc neme Total 4	Duration Hrs 3	Max 1 UA 80 40	Theory Marks CA 20 10	Total 100 50	Marks 40 20	Hrs 3 2	Max	Marks	Total 0 0		100 50 50 50
1	DatabaseManagementSystems R Programming Data Analysis	2 2	Th 4 4 4		BSc neme Total 4 4	Duration Hrs 3 2 2	Max I UA 80 40 40	Theory Marks CA 20 10	Total 100 50 50	Marks 40 20 20	Hrs 3 2 2	Max	Marks	Total 0 0 0		100 50 50 50 50
3	DatabaseManagementSystems R Programming Data Analysis InternetOfthings	4 2 2 2	Th 4 4 4 4 4		BSc neme Total 4 4 4 4	Duration Hrs 3 2 2 2	Max 1 UA 80 40 40	Theory Marks CA 20 10 10 10	Total 100 50 50 50	Marks 40 20 20 20	Hrs 3 2 2 2 2 2	Max	Marks	Total 0 0 0 0 0 0 0 0 0 0 0	marks	100 50 50 50 50 50
3	DatabaseManagementSystems R Programming Data Analysis InternetOfthings Modern language-Marathi	2 2 2 2 2	Th 4 4 4 4 4 4		BSc neme Total 4 4 4 4 4	Duration Hrs 3 2 2 2	Max 1 UA 80 40 40	Theory Marks CA 20 10 10 10 10 10	Total 100 50 50 50 50	Marks 40 20 20 20 20 20	Hrs 3 2 2 2 2 2	Max	Marks CA	Total 0 0 0 0 0 0 0 0 50	marks 25	Marks 100 50 50 50 50 50 50
4	DatabaseManagementSystems R Programming Data Analysis InternetOfthings Modern language-Marathi Environmental Science-(Seminar+Project) LabcourseonDataAnalysisthroughR LabCourseonDBMS	4 2 2 2 2 2 2	Th 4 4 4 4 4 4	Pr.	Acac BSc neme Total 4 4 4 4 4 2	Duration Hrs 3 2 2 2	Max 1 UA 80 40 40	Theory Marks CA 20 10 10 10 10 10	Total 100 50 50 50 50	Marks 40 20 20 20 20 20	Hrs 3 2 2 2 2 2	Max UA 30 30	Marks CA 20 20	Total 0 0 0 0 0 0 0 0 50 50	25 25	Marks 100 50 50 50 50 50 50 50 50 50 50
4	DatabaseManagementSystems R Programming Data Analysis InternetOfthings Modern language-Marathi Environmental Science-(Seminar+Project) LabcourseonDataAnalysisthroughR	4 2 2 2 2 2 2 2 2	Th 4 4 4 4 4 4	Pr.	Acac BSc neme Total 4 4 4 4 4 2 2	Duration Hrs 3 2 2 2	Max 1 UA 80 40 40	Theory Marks CA 20 10 10 10 10 10	Total 100 50 50 50 50	Marks 40 20 20 20 20 20	Hrs 3 2 2 2 2 2	Max UA	Marks CA	Total 0 0 0 0 0 0 0 0 50	marks 25	Marks 100 50 50 50 50 50 50

## "B. Sc. Data Science" Semester-III & IV

				BSc.D	ataScienceS	emeste	r-III								
	T	Teacl	ningSch	eme											
							Theory	/				Practical			
					Duration	MaxN	larks		Min Pass	Duration	Max	Marks		Min Pass	Total
Sr. No Subject	Credit	Th	Pr.	Total	Hrs	UA	CA	Total	marks	Hrs	UA	CA	Total	Marks	Marks
1 WebApplicationDevelopment	4	4		4	3	80	20	100	40	3			0		100
2 ProbabilityandStatistics	2	4		4	2	40	10	50	20	2			0		50
3 FundamentalsinDataScience	2	4		4	2	40	10	50	20	2			0		50
4 JavaProgramming	2	4		4	2	40	10	50	20	2			0		50
5 OperatingSystemandInformationSecurity	2	4		4	2	40	10	50	20	2			0		50
6 Seminar-1	2	2		2			50	50	20				0		50
7 OptimizationTechniques	2	2		2			50	50	20				0		50
8 Labcourse-WebApplicationDevelopment	2		4	4							30	20	50	25	50
9 Labcourse-JavaProgramming	2		4	4				0			30	20	50	25	50
Total	20	24	8	32		240	160	400		11	60	40	100	50	500
	1 1	Teac	hingSch	eme	ataScienceS	emeste	1-1 V								
		Teac	hingSch	eme		·cincstc		,				Practical			
		Teacl	hingSch	eme	Duration		Theory	/	Min Pass	Duration		Practical Marks		Min Pass	Total
Sr. No Subject	Credit	Teacl	hingSch Pr.	Total		MaxM	Theory	Total	Min Pass marks	Duration Hrs		Marks	Total	Min Pass Marks	Total Marks
Sr. No Subject	Credit 4				Duration	MaxN	Theory larks				Max				Marks
		Th		Total	Duration Hrs	MaxN UA	Theory	Total	marks	Hrs	Max	Marks	Total		Marks 100
1 MachineLearning	4	Th 4		Total	Duration Hrs	MaxN UA 80	Theory larks CA 20	Total	marks 40	Hrs 3	Max	Marks	Total 0		Marks 100 50
1 MachineLearning 2 DataWarehouseandDataMining 3 InternetProgrammingwithBigdata 4 Deep Learning	4 2	Th 4 4		Total 4 4	Duration Hrs 3	MaxN UA 80 40	Theory Iarks CA 20 10	Total 100 50	40 20	Hrs 3 2	Max	Marks	<b>Total</b> 0 0		100 50 50
1 MachineLearning 2 DataWarehouseandDataMining 3 InternetProgrammingwithBigdata 4 Deep Learning 5 DataAnalyticsandVisualization	2 2	Th 4 4 4 4		Total 4 4 4	Duration Hrs 3 2 2	MaxN UA 80 40	Theory Iarks CA 20 10	Total 100 50 50	40 20 20	Hrs 3 2 2 2	Max	Marks	Total 0 0 0		100 50 50 50
1 MachineLearning 2 DataWarehouseandDataMining 3 InternetProgrammingwithBigdata 4 Deep Learning 5 DataAnalyticsandVisualization 6 MiniProjectbasedondata science	4 2 2 2	Th 4 4 4 4 4		Total 4 4 4 4	Duration Hrs 3 2 2 2	MaxN UA 80 40 40	Theory 1arks CA 20 10 10	Total 100 50 50 50	marks 40 20 20 20	Hrs 3 2 2 2 2	Max	Marks	Total 0 0 0 0		100 50 50
1 MachineLearning 2 DataWarehouseandDataMining 3 InternetProgrammingwithBigdata 4 Deep Learning 5 DataAnalyticsandVisualization 6 MiniProjectbasedondata science 7 Labcourse-DataWarehouseandDataMining	2 2 2 2 2	Th 4 4 4 4 4 4		Total 4 4 4 4 4	Duration Hrs 3 2 2 2	MaxN UA 80 40 40	Theory 1arks CA 20 10 10 10	Total 100 50 50 50 50	marks 40 20 20 20 20 20 20	Hrs 3 2 2 2 2	Max	Marks	Total 0 0 0 0 0 0 0 0 0	Marks	100 50 50 50 50 50
1 MachineLearning 2 DataWarehouseandDataMining 3 InternetProgrammingwithBigdata 4 Deep Learning 5 DataAnalyticsandVisualization 6 MiniProjectbasedondata science 7 Labcourse-DataWarehouseandDataMining 8 Labcourse-MachineLearning	4 2 2 2 2 2 2 2 2 2	Th 4 4 4 4 4 4	Pr.	Total 4 4 4 4 4 2	Duration Hrs 3 2 2 2	MaxN UA 80 40 40	Theory 1arks CA 20 10 10 10	Total 100 50 50 50 50	marks 40 20 20 20 20 20 20	Hrs 3 2 2 2 2	Max UA	Marks CA	Total 0 0 0 0 0 0 0 0 0 0 0 0 0		100 50 50 50 50
1 MachineLearning 2 DataWarehouseandDataMining 3 InternetProgrammingwithBigdata 4 Deep Learning 5 DataAnalyticsandVisualization 6 MiniProjectbasedondata science 7 Labcourse-DataWarehouseandDataMining	4 2 2 2 2 2 2 2 2	Th 4 4 4 4 4 4	Pr.	Total 4 4 4 4 4 2 2	Duration Hrs 3 2 2 2	MaxN UA 80 40 40	Theory 1arks CA 20 10 10 10	Total 100 50 50 50 50	marks 40 20 20 20 20 20 20	Hrs 3 2 2 2 2	Max UA	Marks CA	Total 0 0 0 0 0 0 0 0 50	Marks	100 50 50 50 50 50 50 50

## "B. Sc. Data Science" Semester- V & VI

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						.DataScienc	eSemes	ter- V								
			Teacl	ningSch	eme		T									
						Theory				Practica						
						Duration	MaxN			MinPass	Duration		Marks		MinPass	Tota
Sr.No	Subject	Credit	Th	Pr.	Total	Hrs	UA	CA	Total	marks	Hrs	UA	CA	Total	marks	Mark
1	Advanced Python Programming	4	4		4	3	80	20	100	40	3			0		100
2	Artificial Intelligence	2	4		4	2	40	10	50	20	2			0		50
3	Software Engineering	2	4		4	2	40	10	50	20	2			0		50
4	Advance Machine Learning	2	4		4	2	40	10	50	20	2			0		50
5	Cryptography and Network Security	2	4		4	2	40	10	50	20	2			0		50
6	Seminar Based On Advance Machine Learning	2	2		2			50	50	20				0		50
7	Research methodology	2	2		2			50	50	20				0		50
	Lab course in Advance Python Programming	2		4	4							30	20	50	25	50
9	Lab Course on Advance Machine Learning	2		4	4				0			30	20	50	25	50
	Total	20	24	8	32		240	160	400		11	60	40	100	50	500
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			Teacl	hingSch	Acad	demicSess .DataScienc	ion202	4-2025 ter-VI Theory		MinPass	Duration		Practica Marks		MinPass	Tota
Sr.No	Subject	Credit			BSc eme	demicSess .DataScienc	eSemes MaxN	4-2025 ter-VI Theory 1arks	,	MinPass marks	Duration Hrs	Max	Marks		MinPass marks	Tota Marl
Sr.No	Subject Cloud Computing	Credit 4	Th	hingSch Pr.	BSc eme Total	Duration Hrs	eSemes MaxM UA	ter-VI Theory larks CA	Total	marks	Hrs			Total	MinPass marks	Mar
1	Cloud Computing	4	Th 4		Acad BSc eme Total	Duration Hrs	MaxN UA 80	Theory 1arks CA 20	Total	marks 40	Hrs 3	Max	Marks	Total 0		Mar 100
1 2	Cloud Computing Natural Language Processing Data Science Using Business Intelligence	-	Th		BSc eme Total	Duration Hrs	eSemes MaxM UA	ter-VI Theory larks CA	Total	marks	Hrs	Max	Marks	Total		Mar 100 50
1 2 3	Cloud Computing Natural Language Processing Data Science Using Business Intelligence Tool	2 2	Th 4 4 4 4		BSc eme Total 4 4 4	Duration Hrs 3 2	MaxN UA 80 40	Theory 1arks CA 20 10 10	Total 100 50 50	40 20 20	Hrs 3 2 2 2	Max	Marks	Total 0 0 0		Mar 100 50 50
1 2 3	Cloud Computing Natural Language Processing Data Science Using Business Intelligence Tool Cyber Security	2 2	Th 4 4 4 4		BSc eme Total 4 4 4 4	Duration Hrs 3 2 2	MaxN   UA   80   40   40	Theory larks CA 20 10 10	Total 100 50 50 50	### marks 40 20 20 20 20 20	Hrs 3 2 2 2 2	Max	Marks	Total 0 0 0 0		Mar 100 50 50
1 2 3 4 5	Cloud Computing Natural Language Processing Data Science Using Business Intelligence Tool Cyber Security Big Data Technologies	2 2 2 2	Th 4 4 4 4 4		Acade BSc eme Total 4 4 4 4 4	Duration Hrs 3 2	MaxN UA 80 40	Theory larks CA 20 10 10 10 10	Total 100 50 50 50 50	### marks  40  20  20  20  20  20  20	Hrs 3 2 2 2	Max	Marks	Total 0 0 0 0 0		Mar 100 50 50 50
1 2 3 4 5	Cloud Computing Natural Language Processing Data Science Using Business Intelligence Tool Cyber Security Big Data Technologies Mini Project Based on NLP or B1 Tool	2 2 2 2 2 2	Th 4 4 4 4	Pr.	Acac BSc eme Total 4 4 4 4 2	Duration Hrs 3 2 2	MaxN   UA   80   40   40	Theory larks CA 20 10 10	Total 100 50 50 50	### marks 40 20 20 20 20 20	Hrs 3 2 2 2 2	Max UA	Marks CA	Total 0 0 0 0 0 0 0 0	marks	Mari 100 50 50 50 50 50
1 2 3 4 5 6 7	Cloud Computing Natural Language Processing Data Science Using Business Intelligence Tool Cyber Security Big Data Technologies Mini Project Based on NLP or BI Tool Lab Course on Data Science Using Business Intelligence Tool	2 2 2 2 2 2 2	Th 4 4 4 4 4	Pr.	Acaa BSo eme Total 4 4 4 4 2 2	Duration Hrs 3 2 2	MaxN   UA   80   40   40	Theory larks CA 20 10 10 10 10	Total 100 50 50 50 50	### marks  40  20  20  20  20  20  20	Hrs 3 2 2 2 2	Max UA	Marks CA	Total 0 0 0 0 0 0 0 50	marks 25	Mar 100 50 50 50 50 50 50
1 2 3 3 4 5 6 7	Cloud Computing Natural Language Processing Data Science Using Business Intelligence Tool Cyber Security Big Data Technologies Mini Project Based on NLP or BI Tool Lab Course on Data Science Using Business Intelligence Tool Lab Course on Cyber Security	2 2 2 2 2 2 2 2	Th 4 4 4 4 4	Pr.	Acad   BSc   eme	Duration Hrs 3 2 2	MaxN   UA   80   40   40	Theory larks CA 20 10 10 10 10	Total 100 50 50 50 50 50 50	### marks  40  20  20  20  20  20  20	Hrs 3 2 2 2 2	Max UA 30 30	Marks CA 20 20	Total 0 0 0 0 0 0 0 50 50	25 25	Mar 100 50 50 50 50 50 50 50
1 2 3 3 4 5 6 7	Cloud Computing Natural Language Processing Data Science Using Business Intelligence Tool Cyber Security Big Data Technologies Mini Project Based on NLP or BI Tool Lab Course on Data Science Using Business Intelligence Tool	2 2 2 2 2 2 2	Th 4 4 4 4 4	Pr.	Acaa BSo eme Total 4 4 4 4 2 2	Duration Hrs 3 2 2	MaxN   UA   80   40   40	Theory larks CA 20 10 10 10 10	Total 100 50 50 50 50	### marks  40  20  20  20  20  20  20	Hrs 3 2 2 2 2	Max UA	Marks CA	Total 0 0 0 0 0 0 0 50	marks 25	Mar 100 50 50 50 50 50 50

## "B. Sc. Data Science" Semester-VII & VIII

						taScienceS	emester	·-VII								
			Teacl	ningSch	eme				-			_				
								Theory		1 N. 1 D.	D .:	Practical MaxMarks			14: D	Total
Sr. No	Subject	Credit	Th	Pr.	Total	Duration Hrs	MaxN UA	CA	Total	Min Pass marks	Duration Hrs	Max. UA	CA	Total	Min Pass Marks	Total Mark
1	Capstone Project Based on Real World Project that involves data collection, Analysis and Deployment of ML model	10		10	20	3	100	100	200	100	3	0.1	CIT	0		200
2	Advance Artificial Intelligence	2	4		4	2	80	20	100	100	3	3000		0		100
3	Ethics and Data Privacy	2	4		4	2	80	20	100	40	3			0		100
4	Elective-I:-i.) Robotics ii).Computer Vision iii).Computer Graphics	2	4		4	2	80	20	100	40	3			0		100
	Total	20	24	8	32		340	160	500		12			00	00	500
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						micSessio										
					BSc.Da	taScienceS	emester	-VIII								
			Teac	hingSch	eme											
								Theor	y				Practical			
a .:						Duration	MaxN	larks		Min Pass	Duration	Max	Marks		Min Pass	Total
Sr. No		Credit	Th	Pr.	Total	Hrs	UA	CA	Total	marks	Hrs	UA	CA	Total	Marks	Mark
	1 Internship or Research Project	10		10	20	3	100	100	200	100	3			0		200
	2 Block chain Technology	2	4		4	2	80	20	100	40	3			0		100
	3 Graph Analytics and Network Science	2	4		4	2	80	20	100	40	3			0		100
	4 Elective-I:- i. AI in Business ii.Social network iii.AI in Health Care	2	4		4	2	80	20	100	40	3			0		100
		20	24	8	32		340	160	500		12	_		00	00	500

## 10. Evaluation Scheme for project /Internship/Research project

- a) Students of B.Sc. Data Science must has to compulsorily undergo Research Project similarly required to undertake an internship.
- b) Research Project/Dissertations/Thesis/Project work For the 4-year UG degree programme (Honours with Research), engagement of students in the dissertations/research project during the entire 8th semester of 10 credits will be considered as a mandatory component for the award of the degree. The students need to essentially submit the research project/dissertations/thesis/project work to the allotted mentor. The submission of the report with the conduction of viva will also be a component for the successful evaluation of the dissertation/research project/thesis/Project work.
- c) Duration and Slots for Internship in Curriculum of B.Sc.(Data Science)student may complete an internship during after the 8th semester of the UG degree programmed focusing on Hands-on Training/Short Research Project. However, the student who has to go for a 4-year B.Sc.(Data Science)UG degree (Honours with Research) programme will be required to choose courses as given during 8th Semester
  - Hands-on Training/Short Research Project Seminar attendance Read assigned journals to prepare for seminars Study certain entrepreneurs Social projects Study of the enterprises.
  - ii. Students may adopt Research Methodology, Research Tools and Techniques, Research Ability Enhancement and Policy Framework Courses, Dissertation/Thesis/Project.

#### 11. Internal Assessment:

Class Tests: Conducted at least two for theory course.

Assignments/Presentation: Include assignments, Seminars or presentations to assess understanding and application of knowledge.

Lab Involvement /Records (for practical courses ): For practical courses, lab performance , record, and attendance.

## 12. "B. Sc. Data Science" Question Paper Pattern For Semester I,II,III,IV,V,VI,VII,VIII

- A. General Rules and Regulations regarding pattern of question paper for the semester end examination is as given below:
  - i. For 100 Marks Courses, University assessment will consist of 80 marks having five questions, each of 16 marks and five questions will be based on five units with internal choice as shown in the following table 4(A) whereas Class Assessment will have 20 marks (Test Paper 40 %, Assignment 30%, Class room participation based on attendance 30%).

## Table 4 (A) University Assessment

Time :3 Hours Total Marks:80

	A)Theory	8
	B)Theory	8
Que No.1-Unit-I	OR	
	C)Theory	8
	D)Theory	8
	A)Theory	8
	B)Theory	8
Que No.2-Unit-II	OR	
	C)Theory	8
	D)Theory	8
	A)Theory	8
	B)Theory	8
Que No.3-UnitIII	OR	-
	C)Theory	8
	D)Theory	8

	OR	
Que No.4-Unit-IV	C)Theory	8
	D)Theory	8
	B)Theory	8
	A)Theory	8
	B)Theory	8
Que No.5-Unit-V	OR	
	C)Theory	8
	D)Theory	8

ii. For 50 marks courses, University Assessment will consist of 40 Marks having five questions, each of 8 marks as shown in the following table 4 (B) whereas Class Assessment will have 10 marks (Test Paper 40 %, Assignment 30%, Class room participation based on attendance 30%).

Table 4 (B) University Assessment

Time: 2 Hours

Total Marks: 40

	A)Theory	4
	B)Theory	4
Que No.1-Unit-I	OR	2
	C)Theory	4
	D)Theory	4
	A)Theory	4
	B)Theory	4
Que No.2-Unit-II	OR	
	C)Theory	4
	D)Theory	4
	A)Theory	4
	B)Theory	4
Que No.3-Unit-III	OR	
	C)Theory	4
	D)Theory	4
	A)Theory	4
	B)Theory	4
Que No.4-Unit-IV	OR	
	C)Theory	4
*	D)Theory	4
Oue No 5 Fem all	A)Theory	2
Que No.5 For all I,II,II,IV Units	B)Theory	2
(Compulsory)	C)Theory	2
(Compuisory)	D)Theory	2

## 13. Marks to Letter Grade & Grade Point Conversion

The marks scored by the examinees in their courses/ heads of passing of the program shall be converted into Letter Grade and Grade Point as per Table given below:

Table5: Conversion of marks into letter grade and grade points

Letter Grade	Grade Point
O(outstanding)	10
A+(Excellent)	9
A(Verygood)	8
B+(Good)	7
B(Aboveaverage)	6

P(Pass)	4
F(Fail)	0
Ab(Absent)	0

<sup>\*</sup>Note: As such, the lowest passing Grade in any passing head shall be 'P'.

14. **RULES FOR PROMOTION TO THE HIGHER SEMESTERS**: The students shall be required to acquire minimum CREDITS to move into the higher semester. The students admitted to the UG Program in NEP pattern shall be entitled for promotion to the higher semester, based on the conditions mentioned below.

ADMISSION TO SEMESTER	CONDITION TO BE FULFILLED BY THE STUDENT
I	HSSC
II	Candidate should have appeared in at least 01
	Theory Paper of Semester -1
III	Candidate should have passed 40% passing heads.
	each of Semester - I & Semester II
IV	Candidate should have passed 40% passing heads
	each of Semester –I & Semester II & appeared at
	least 01 theory paper of Semester -III
V	Candidate should have passed 40% of passing
	heads of each Semester III & IV respectively.
VI	Candidate should have passed 40% passing heads
2	each of Semester-III & Semester IV & appeared in
	at least 01 -Theory paper of Semester V
VII	Candidate should have passed 40% of passing
	heads of each Semester V & VI respectively.
VIII	Candidate should have passed 40% passing heads
	each of Semester-V & Semester-VI & appeared in
	at least 0l theory paper of Semester VII

## a) Calculation of Grade Point Average (GPA)

 $The Grade Point Average (GPA) shall be calculated for the program and shall be evaluated as \ mentioned \ below:$ 

$$GPA = \frac{\sum_{i=1}^{n} C_i \times G_i}{\sum_{i=1}^{n} C_i}$$

Where  $C_i$  is the number of credits of the  $i^{th}$  course and  $G_i$  is the grade point scored by the student in the  $i^{th}$  course.

The percentage of marks scored based on obtained GPA can be evaluated using below given formula.

$$Percentage = (GPA - 0.75) *10$$

## 15. Division of Passing

The Division of Passing shall be based on GPA secured by an Examinee as shown in the Table 3 below:

### Table6:Interpretation of GPA into Division of Passing

INTERVALOFGPA	DIVISIONOFPASSING
<i>GPA</i> ≥8.25	First with Distinction
6.75≤ <i>GPA</i> <8.25	First
6.00≤ <i>GPA</i> <6.75	Second
5.00≤ <i>GPA</i> <6.00	Third
5.00≤ <i>GPA</i> <5.55	Average
$4.00 \le GPA < 5.00$	Pass
3.00	Fail

- 16. Declaration of result is based on the Grade Point Average (GPA) earned towards the end of the program as given in Table3. The names of the successful examinees passing the examination as a whole in the minimum prescribed period and obtaining prescribed number of places securing the grades as per adopted credit-grade system shall be arranged in order of merit as provided in ordinance relating to examinations in general.
- 17. Provisions with respect to grace marks for passing in a particular course/ head of passing and improvement of Division (Higher Class) and getting Distinction in any course shall be as per relevant Direction/Ordinance of the University.
- 18. An examinee who does not qualify in examination or remain absent for the examination, shall be eligible to appear in the same re-examination, on payment of re-examination fee and such other fees as may be prescribed from time to time, within 30 days from the date of result.
- 19. Successful examinees who secure minimum prescribed registered credits (120) for the program duration shall be entitled to receive a Degree of full time Four Years Degree Programme entitled "B. Sc. Data Science" in the Faculty of Science & Technology signed by the Vice Chancellor of the University on payment of prescribed fees.
- 20. In the event of any query regarding interpretation/ application of any provision of this direction, the Director of Board of Examinations and Evaluation shall refer the matter for the decision of the Dean of the Faculty of Science & Technology or alternatively to the Board of Deans if found necessary.
- 21. For any other matter pertaining to this Program and its final award which is beyond the purview of this Direction, it shall be referred to the Vice-Chancellor and that the decision of the Vice- Chancellor shall be final and binding on all the concerned.

Place:Gadchiroli

Date: 04/07/2025

(Dr.Prashant S.Bokare)

Vice-Chancellor