DIRECTION NO. 1.7. OF 2023

The Admission and Examination leading to the Post Graduate Diploma in Data Science (PGDDS) Credit Based System Direction 2023

Whereas the Maharashtra Universities Act, 2016 is made applicable to the University w.e.f. 1st March 2017 (hereinafter referred to as the Act);

AND

Whereas, the Management Council in its meeting vide item no. 179 has decided to start Post Graduate Diploma in Data Science (PGDDS) and Post Graduate Diploma in Information Security (PGDIS) Credit Based System in Oberai Center for excellance from the Academic year 2022-23;

AND

Whereas, the Ad-hoc Board of Studies (P.G. Industrial Robotics) in the Faculty of Science in its meeting held on 29-12-2022 vide item No. 11 have approved the syllabi and scheme of examination for the Post Graduate Diploma in Data Science (PGDDS) and Post Graduate Diploma in Information Security (PGDIS) Credit Based System in the university from the academic session 2022-23;

AND

Whereas, the Academic Council in its meeting dated 4.3.22 vide item no. 32 has also approved the said Syllabi and Scheme of Examination as prepared by the Ad-hoc Board of Industrial Robotics in the Faculty of Science and Technology;

AND

Whereas, the framing of an ordinance as required to start any Diploma or Degree under provisions of the Act, but making of an Ordinance is a time-consuming process and there is an excigency to start with the diploma as per the decision of Management Council;

Now, therefore, Dr. Subhash R. Chaudhari, the Vice Chancellor of Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur in exercise of the powers conferred under provision of section 12(8) of the Maharashtra Public Universities Act, 2016, do hereby issue the following direction:

1. This Direction shall be called " The Admission and Examination leading to the Post Graduate Diploma in Data Science (PGDDS) Credit Based System
    Direction 2023.

2. The duration of the Post Graduate Diploma in Data Science (PGDDS) Credit Based System shall be of One year consisting of two semester with University examinations at the end of each semester namely:
    a. Post Graduate Diploma in Data Science (PGDDS) Credit Based System Semester I Exam.
    b. Post Graduate Diploma in Data Science (PGDDS) Credit Based System Semester II Exam.

3. The theory examination of Semester-I, and II shall be conducted by the University twice a year that is Winter Examination and Summer Examination and at such places and dates as may be decided and notified by the University.

4. **ELIGIBILITY TO THE COURSE:**

    a) For Semester – I
        The applicants should have passed B.E /B.Tech (Electronics, Electronics & Telecommunication, Electronics & Communication or allied, Computer Science, Information Technology or allied), OR B.Sc (IT ,Electronics or CS, BCA or MCA or any other degree at undergraduate level with Physics and Mathematics as Compulsory subjects of this University OR an equivalent Bachelor Degree of any statutory University in India and Abroad.

    b) For Semester – II
        An applicant of the PGDDS Semester II Examination, applicant shall have Appeared PGDDS Semester- I Examination of this University.

<div align="center">Table-I</div>

Admission to Semester	Candidate should have passed in following examinations	Candidate should have completed the term and filled examination form
I Semester	Degree examination as specified in 4(a)	
II Semester	-	Semester – I

5. Without prejudice to the other provisions of Ordinance No 6 relating to the Examinations in General, the provisions of Paragraphs 5, 7, 8, 10, 26 and 31 of the said Ordinance shall apply to every collegiate candidate.

6. The fees for the course/ examination shall be as prescribed by the University from time to time.

7. (A) The scope of the subjects and pattern of examination shall be as indicated in Course and Examination Scheme & Syllabus as per ANNEXURE - A

(B) The Medium of instructions and examinations shall be in ENGLISH only

8. Applicant for PGDDS Examination pursuing regular course of study shall not be permitted to join any other course in this or any other University.

9. **ASSESSMENT**

- The final total assessment of the candidates is made in terms of an Internal assessment (Sessional) and an external assessment for each course as indicated in ANNEXURE-A

- The division of the 20 / 1 0 marks allotted to internal assessment of theory papers is on the basis of written test, seminars, presentations and attendance as determined by the teacher in respective subject and moderated by the Head of the Institute /Principal.

- An unsuccessful examinee shall be eligible for re examination on payment of fresh examination fee prescribed by the University as per the respective directions.

- The internal marks will be communicated to the University at the end of each semester, but before the semester examinations.

- The record of internal marks, evaluation & result should be maintained for a period of one year by respective institute/college for verification by competent authority.

- The Maximum and Minimum marks for each subject in PGDDS Semester-I and Semester-ii Examination are as indicated in ANNEXURE – A.

- A copy of Project work / Internship shall be submitted to college prior to commencement of Semester I. Examination for Evaluation by Internal and External Examiner appointed as per University rules

- Candidate shall submit his/her declaration that the Project Work / Internship is a result of his/her own work and the same has not been previously submitted to any examination of this University or any other University

- The Practical Examination of each Semester will be conducted by Internal and External Examiner appointed as per University rules.

10. If an examinee absent /failed to pass the PGDDS Degree within Three Successive Years from the date of his/her First Admission to particular programme he/she shall be declared as "Not Fit for the Course" (NFC) and he/she will not be allowed to appear further for any examination of the course.

10.(a) There shall be no classification of examinees successful at the PGDDS Semester-I Examination whereas SGPA will be notified.

Conversion of Marks to Grades and Calculations of SGPA (Semester Grade Point Average) and CGPA (Cumulative Grade Point Average):

In the Credit and Grade Point System, the assessment of individual Course in the concerned examinations will be on the basis of marks only, but the marks shall later be converted into Grades by mechanism given in Table-II where in the overall performance of the Learners can be reflected after considering the Credit Points for any given course. However, the overall evaluation shall be designated in terms of cumulative Grade point. There are some abbreviations used here that need understanding of each and every parameter involved in grade computation and the evaluation mechanism. The abbreviations and formulae used are as follows Abbreviations and Formulae Used

C: Credits
CP: Credit Points
CG: Credits X Grades
(Product of Credits &

Grades) G: Grade (Absolute Grade)

GP: Grade Points

The value can be matched with the grade in the Grade Point table as per the Seven (07) Points Grading System and expressed as a single designated GRADE such as O, A, B, etc given in Table- II

Table-II

(a) Percentage of marks obtained in Course Theory Subjects out of 100.

Marks Range	Grade	Grade Point	Performance
90 - 100	O	10	Outstanding
80 - < 90	A+	9	Excellent
70- < 80	A	8	Very Good
60 - < 70	B+	7	Good
55- < 60	B	6	Above Average
50 - < 55	P	5	Pass
Below 50	F	-	Fail
Absent	AB	-	Absent

(b) Percentage of marks obtained in Course Theory Subjects out of 50.

Marks Range	Grade	Grade Point	Performance
45 - 50	O	10	Outstanding
40 - < 45	A+	9	Excellent
35 - < 40	A	8	Very Good
30 - < 35	B+	7	Good
28 - < 30	B	6	Above Average
25 - < 28	P	5	Pass
Below 25	F	-	Fail
Absent	AB	-	Absent

(c)Percentage of marks obtained in Course Practical Subjects out of 50.

Marks Range	Grade	Grade Point	Performance
45 - 50	O	10	Outstanding
40 - < 45	A+	9	Excellent
35 - < 40	A	8	Very Good
30 - < 35	B+	7	Good
28 - < 30	B	6	Above Average
25 - < 28	P	5	Pass
Below 25	F	-	Fail
Absent	AB	-	Absent

(d)Percentage of marks obtained in Course for Project out of 250.

Marks Range	Grade	Grade Point	Performance
225 - 250	O	10	Outstanding
200 - < 225	A+	9	Excellent
175- < 200	A	8	Very Good
150 - < 175	B+	7	Good
138 - < 150	B	6	Above Average
125 - < 138	P	5	Pass
Below 125	F	-	Fail
Absent	AB	-	Absent

SGPA = ΣCG. Sum of Product of Credits & Grades points / ΣC

Sum of Credits

SGPA: Semester Grade Point Average shall be calculated for

individual semester.

CGPA: Cumulative Grade Point Average shall be calculated for the entire Program by considering all the semesters taken together

(e) Division at the PGDDS Semester-ii Examination shall be declared on the aggregate credits earned at the PGDDS Semester-1 and Semester-ll Examination taken together. The CGPA will be calculated as follows and notified. After calculating the SGPA for an individual semester and the CGPA for entire programme as per following formula.

$$CGPA = \frac{\text{Credits earned for Sem I + Credits earned for Sem-II}}{\text{Total No. of credits for Sem-I + Sem-II}}$$

(f) Successful examinees at the PGDDS Semester-ll Examination shall be awarded division, based on CGPA as follows given in Table-Ill

Table-Ill

CGPA Range	Equivalent Class/ Division
5.75 to 6.74	Second Division
6.75 to 8.24	First Division
8.25 to 10.0	First Division with Distinction

(d) For conversion of CGPA to percentage use the formula

$$\% = CGPA \times 10$$

11. Successful examinees in the PGDDS Examination shall be awarded Distinction in each subject in which examinees obtain 75% or more marks in that subject at the respective Examination.

12. Unsuccessful examinees at the above examinations can be readmitted to the same examination on payment of a fresh fee and such other fees as may be prescribed

13. Provisions of Ordinance NO 3 OF 2007 relating to the award of Grace marks for passing an examination, securing higher division / class and for securing distinction in subject(s) as amended up-to-date shall apply to the Examinations under this Direction.

14. Notwithstanding anything to the contrary in this Direction, no person shall be admitted to an examination under this Ordinance, if he/ she has already passed the same examination or an equivalent examination of any other University.

15. Examinees successful at PGDDS (Semester-I and II) Examination shall on payment of the prescribed fees receive a Diploma in the prescribed form signed by the Vice-Chancellor.

16. This scheme shall come into force from the academic session 2022-23

Date : 25-4-2022
Nagpur

(Dr. Subhash R. Chaudhari)
Vice-Chancellor

Faculty of Engineering & Technology
Course and Examination Scheme of Post Graduate Diploma in Data Science
First Semester

Subject Code	Hours	Subject	Teaching Scheme Hours per week L	T	P	No. of Credits	Examination Scheme Theory Duration of Paper (Hrs.)	Max. Marks University Assessment	Max. Marks College Assessment	Total Marks	Min. Passing Marks	Practical Max. Marks University Assessment	Max. Marks College Assessment	Total Marks	Min. Passing Marks
PGDDS101T	45	Statistics and Probability	03	01	-	03	03	80	20	100	50	-	-	-	-
PGDDS102T	45	Python Programming	03	-	-	03	03	80	20	100	50	-	-	-	-
PGDDS102P	30	Python Programming	--	-	04	02	-	-	-	-	--	25	25	50	25
PGDDS103T	45	Data Aggregation & Pre-processing	03	-	--	03	03	80	20	100	50	-	-	-	-
PGDDS103P	30	Data Aggregation & Pre-processing	--	-	04	02	-	-	-	-	--	25	25	50	25
PGDDS104T	45	Database Management System	04	-	--	03	03	80	20	100	50	-	-	-	-
PGDDS104P	30	Database Management System	--	-	04	02	-	-	-	-	--	25	25	50	25
PGDDS105T	30	Effective Communication Skills	03	-	-	02	01	30	20	50	25	-	-	-	-
Total	300		16	01	12	20	13	350	100	450	225	75	75	150	75
Semester Total	29 Hrs					20 Cr						Marks 550			

Course and Examination Scheme of Post Graduate Diploma in Data Science
Second Semester

Subject Code	Hours	Subject	Teaching Scheme				Examination Scheme									
			Hours per week			No. of Credits	Theory						Practical			
			L	T	P		Duration of Paper (Hrs.)	Max. Marks University Assessment	Max. Marks College Assessment	Total Marks	Min. Passing Marks	Max. Marks University Assessment	Max. Marks College Assessment	Total Marks	Min. Passing Marks
PGDDS201T	45	Machine Learning	04	-	-	03	03	80	20	100	50	-	-	-	-
PGDDS201P	60	Machine Learning	--	-	04	02	-	-	-	-	--	25	25	50	25
PGDIR202T	45	Big Data Analytics	04	-	-	03	03	80	20	100	50	-	-	-	-
PGDDS202P	60	Big Data Analytics	--	-	04	02	-	-	-	-	--	25	25	50	25
PGDDS203T	45	Dimension Reduction and Model Validation	03	-	-	03	03	80	20	100	50	-	-	-	-
PGDDS203P	30	Dimension Reduction and Model Validation	--	-	02	01	-	-	-	-	--	25	25	50	25
PGDDS204T	45	Data Mining	02	--	-	03	03	80	20	100	50	-	-	-	-
PGDDS204P	30	Data Mining	--	-	02	01	-	-	-	-	--	25	25	50	25
PGDDS205P	60	Project	--	-	04	04	-	-	-	-	-	25	25	50	25
Total	420 Hours		13	-	16	22	12	320	80	400	200	125	125	250	125
Semester Total 29Hours												225	225	450	225

Max Marks 850 & Min Marks 425