

**RASHTRASANT TUKADOJI MAHARAJ NAGPUR
UNIVERSITY, NAGPUR**



**Scheme of Teaching and Examination
for
Master of Science (M.Sc.) in Mathematics**

**Two Year (Four Semester) Post Graduate Choice Based Credit
System Degree Program in Mathematics as per NEP-2020
with effect from Academic Year 2023-24**

Shrile
2/8/2023

Credit distribution structure for two years Post Graduate Program in Mathematics*:

Year (2 Yrs. PG)	Level	Sem. (2 Yr)	Major		RM	OJT/FP	RP	Cum. Cr.	Degree
			Mandatory	Electives					
I	6.0	Sem. I	14 (3 Theory + 1 Practical)	4	4	--	--	22	PG Diploma (After 3 Yr Degree)
		Sem. II	14 (3 Theory + 1 Practical)	4	--	4	--	22	
Cum. Cr. For PG Diploma/ I year of PG			28	8	4	4	-	44	
Exit option: PG Diploma 44 credits after three-year degree									
II	6.5	Sem. III	14 (3 Theory + 1 Practical)	4	--	--	4	22	PG Degree (After 3 Yrs. UG or PG degree after 4-Yrs UG)
		Sem. IV	12 (3 Theory)	4	--	--	6	22	
Cum. Cr. For II year of PG			26	8	--	--	10	44	
Cum. Cr. For 2 year of PG degree			54	16	4	4	10	88	

*Source: शासन निर्णय क्रमांक :एनईपी-२०२२/प्र. क. ०९/विशि-३ शिकाना दिनांक १६ मे ,२०२३

**Table I: Scheme of Teaching and Examination for
First Semester M.Sc. Mathematics (CBCS) Program**

Structure and Credit distribution for M.Sc. Mathematics Semester-I												
Course Category	Code	Title of Course	Teaching Scheme (Hours /Week)				Credits	Examination Scheme				
			Theory	Practical/Project	Total	Duration (hrs.)		Maximum Marks		Total Marks	Minimum Passing Marks	
								Semester End Examination (SEE)	Continuous Internal Evaluation (CIE)		Theory	Practical
Mandatory (DSC)	MMT1T01	Paper M1: Algebra	4	--	4	4	3	80	20	100	40	--
	MMT1T02	Paper M2: Topology	4	--	4	4	3	80	20	100	40	--
	MMT1T03	Paper M3: Ordinary Differential Equations	4	--	4	4	3	80	20	100	40	--
	MMT1P01	Practical 1: Computation with C/C++	--	4	4	2	3	50	50	100	--	50
Elective 1 (DSE)	Select any one											
	MMT1T04	Paper M4: (A) Integral Equations	4	--	4	4	3	80	20	100	40	--
		Paper M4: (B) Fuzzy Mathematics										
		Paper M4: (C) Equivalent MOOC Course										
RM	MMT1T05	Paper M5: Research Methodology in Mathematics	3	--	3	3	3	60	15	75	30	---
		Practical on Research Methodology	--	2	2	1	2	--	25	25	--	10
Total			20	4	24	22	--	430	170	600	190	60

**Table II: Scheme of Teaching and Examination for
Second Semester M.Sc. Mathematics (CBCS) Program**

Structure and Credit distribution for M.Sc. Mathematics Semester-II												
Course Category	Code	Title of Course	Teaching Scheme (Hours / Week)				Credits	Examination Scheme				
			Theory	Practical/Project	Total	Duration (hrs.)		Maximum Marks		Total Marks	Minimum Passing Marks	
								Semester End Examination (SEE)	Continuous Internal Evaluation (CIE)		Theory	Practical
Mandatory (DSC)	MMT2T06	Paper M6: Real Analysis	4	--	4	4	3	80	20	100	40	--
	MMT2T07	Paper M7: Differential Geometry	4	--	4	4	3	80	20	100	40	--
	MMT2T08	Paper M8: Advance Numerical Methods	4	--	4	4	3	80	20	100	40	--
	MMT2P02	Practical 2: Numerical solutions with Computer Programming	--	4	4	2	3	50	50	100	--	50
Elective 2 (DSE)	Select any one											
	MMT2T09	Paper M9: (A) Classical Mechanics	4	--	4	4	3	80	20	100	40	--
		Paper M9: (B) Operation Research										
		Paper M9: (C) Equivalent MOOC Course										
OJT/FP	MMT2P03	Practical 3: On Job Training/FP	--	8	8	4	6	50	50	100	--	50
Total			16	12	28	22	--	420	180	600	160	100

Exit option: One year PG Diploma will be awarded (44 credits) after three-year UG degree course subject to the completion of 4 credits on Job training/Internship in major subject during summer break after M Sc Semester-II.

**Table III: Scheme of Teaching and Examination for
Third Semester M.Sc. Mathematics (CBCS) Program**

Structure and Credit distribution for M.Sc. Mathematics Semester-III													
Course Category	Code	Title of Course	Teaching Scheme (Hours /Week)				Credits	Examination Scheme					
			Theory	Practical/Project	Total	Duration (hrs.)		Maximum Marks		Total Marks	Minimum Passing Marks		
								Semester End Examination (SEE)	Continuous Internal Evaluation (CIE)		Theory	Practical	
Mandatory (DSC)	MMT3T10	Paper M10- Complex Analysis	4	--	4	4	3	80	20	100	40	--	
	MMT3T11	Paper M11- Functional Analysis	4	--	4	4	3	80	20	100	40	--	
	MMT3T12	Paper M12- Advance Mathematical Methods	4	--	4	4	3	80	20	100	40	--	
	MMT3P04	Practical 4: Python Programming	--	4	4	2	3	50	50	100	--	50	
Elective 3 (DSE)	Select any one												
	MMT3T13	Paper M13: (A) General Theory of Relativity	4	--	4	4	3	80	20	100	40	--	
		Paper M13: (B) Fluid Dynamics											
		Paper M13: (C) Equivalent MOOC Course											
Research Project	MMT3P05	Research Project (Minor)	--	8	8	4	6	50	50	100	--	50	
Total			16	12	28	22	--	420	180	600	160	100	

**Table IV: Scheme of Teaching and Examination for
Fourth Semester M.Sc. Mathematics (CBCS) Program**

Structure and Credit distribution for M.Sc. Mathematics Semester-IV												
Course Category	Code	Title of Course	Teaching Scheme (Hours /Week)			Credits	Examination Scheme					
			Theory	Practical/Project	Total		Duration (hrs.)	Maximum Marks		Total Marks	Minimum Passing Marks	
								Semester End Examination (SEE)	Continuous Internal Evaluation (CIE)		Theory	Practical
Mandatory (DSC)	MMT4T14	Paper 14: Dynamical System	4	--	4	4	3	80	20	100	40	--
	MMT4T15	Paper 15: Measure and Integration Theory	4	--	4	4	3	80	20	100	40	--
	MMT4T16	Paper 16: Partial Differential Equations	4	--	4	4	3	80	20	100	40	--
Elective 4 (DSE)	Select any one											
	MMT4T17	Paper 17: (A) Cosmology	4	--	4	4	3	80	20	100	40	--
		Paper 17: (B) Number Theory										
		Paper M17: (C) Equivalent MOOC Course										
Research Project	MMT4P06	Research Project (Major)	--	12	12	6	6	100	100	200	--	100
Total			16	12	28	22	--	420	180	600	160	100