

MOHANLAL SUKHADIA UNIVERSITY, UDAIPUR

DEPARTMENT OF MATHEMATICS AND STATISTICS

Master of Science/ Arts (M.Sc./M.A.) 2023-24

Faculty : SCIENCE

Subject : MATHEMATICS

Proposed Mathematics Courses for CBCS in 2 year M.Sc. Program: Semester wise types, codes, titles, Delivery type, Workload, Credits of the courses, Marks of Examination and Remarks.

Level	Semester	Course Type	Course Code	Title	Delivery Type			Total Hours	Credit	Total Credit	Internal Assessment	EoS Exam	M. M.	Remarks	
					L	T	P								
8	I	DCC	MAT8000T	Advanced Abstract Algebra-I	L	T	-	90	5+1	6	20	80	100	---	
			MAT8001T	Measure Theory	L	T	-	90	5+1	6	20	80	100	---	
			MAT8002T	Differential Equations & Calculus of Variations	L	T	-	90	5+1	6	20	80	100	---	
			MAT8003T	Differential Geometry	L	T	-	90	5+1	6	20	80	100	---	
8	II	DCC	MAT8004T	Advanced Abstract Algebra-II	L	T	-	90	5+1	6	20	80	100	---	
			MAT8005T	Complex Analysis	L	T	-	90	5+1	6	20	80	100	---	
			MAT8006T	Special Functions	L	T	-	90	5+1	6	20	80	100	---	
		Select any one of the following Generic Elective Course (GEC) Courses in II semester, May be opted from other Departments.													
		GEC	MAT8100T	Dynamics of Rigid Bodies	L	T	-	90	5+1	6	20	80	100	Only for the students of M.Sc. Mathematics	
			MAT8101T	Matrix Algebra	L	T	-	60	4	4	20	80	100	---	
			MAT8102T	Number Theory	L	T	-	90	5+1	6	20	80	100	Only for the students of M.Sc. Mathematics	
MAT8103T	Counting Techniques		L	T	-	60	4	4	20	80	100	---			

Level	Semester	Course Type	Course Code	Title	Delivery Type			Total Hours	Credit	Total Credit	Internal Assessment	EoS Exam	M. M.	Remarks	
					L	T	P								
9	III	DCC	MAT9000T	Topology	L	-	-	60	4	4	20	80	100	---	
			MAT9001T	Relativity and Tensor Analysis	L	-	-	60	4	4	20	80	100	---	
		Select any two of the following Discipline specific Elective (DSE) Courses in III semester.													
		DSE	MAT9100P	Computer Programming in-C	L	-	P	30+ 120 = 150	2+4	6	20	80	100	Students of B.Sc. (Comp. Sci.) can't opt.	
			MAT9101T	Optimization Techniques-I	L	T	-	90	5+1	6	20	80	100	---	
			MAT9102T	Mathematical Theory of Statistics-I	L	T	-	90	5+1	6	20	80	100	Students of B.Sc. (Statistics) can't opt	
			MAT9103T	Discrete Mathematics-I	L	T	-	90	5+1	6	20	80	100	---	
			MAT9104T	Integral Transforms	L	T	-	90	5+1	6	20	80	100	---	
		Select any one of the following Generic Elective Course (GEC) Courses in III semester, May be opted from other Departments.													
		GEC	MAT9105T	Numerical Analysis	L	T	-	60	4	4	20	80	100	---	
			MAT9106T	Applied Mathematics	L	T	-	60	4	4	20	80	100	---	
			MAT9107T	Inventory Management	L	T	-	60	4	4	20	80	100	---	
			MAT9108P	Mathematica	-	-	P	120	4	4	20	80	100	---	

Level	Semester	Course Type	Course Code	Title	Delivery Type			Total Hours	Credit	Total Credit	Internal Assessment	EoS Exam	M. M.	Remarks	
					L	T	P								
9	IV	DCC	MAT9002T	Functional Analysis	L	T	-	90	5+1	6	20	80	100	---	
		Select any three of the following Discipline specific Elective (DSE) Courses in IV semester.													
		DSE	MAT9109P	Computer Programming of Numerical Methods	L	-	P	30+120=150	2+4	6	20	80	100	If opted C-Prog. as DSE in M.Sc. III Sem	
			MAT9110T	Optimization Techniques-II	L	T	-	90	5+1	6	20	80	100	If opted OT-I as DSE in M.Sc. III Sem	
			MAT9111T	Mathematical Theory of Statistics-II	L	T	-	90	5+1	6	20	80	100	If opted MTS-I as DSE in M.Sc. III Sem	
			MAT9112T	Discrete Mathematics-II	L	T	-	90	5+1	6	20	80	100	If opted DM-I as DSE in M.Sc. III Sem	
			MAT9113T	General Relativity and Cosmology	L	T	-	90	5+1	6	20	80	100	---	
			MAT9114T	Advanced Numerical Analysis	L	T	-	90	5+1	6	20	80	100	---	
			MAT9115T	Integral Equations	L	T	-	90	5+1	6	20	80	100	If opted IT as DSE in M.Sc. III Sem	

OT-I: Optimization Techniques-I MTS-I: Mathematical Theory of Statistics-I

DM-I: Discrete Mathematics-I IT: Integral Transforms

DCC- Discipline Centric Compulsory

Course (MAT8000T to MAT8006T, MAT9000T to MAT9002T)

DSE- Discipline Specific Core Course

(MAT9100P, MAT9101T to MAT9104T, MAT9109P, MAT9110T to MAT9115T)

GEC- Generic Elective Course

(MAT8100T to MAT8103T, MAT9105T to MAT9107T & MAT9108P)

MOHANLAL SUKHADIA UNIVERSITY, UDAIPUR

M.Sc./M.A. (Two Years Degree Program)

Subject: MATHEMATICS

End of Semester (EoS) Examination pattern of Theory Papers:

As proposed in the academic council held on 26-06-2023.

Internal Examination

Duration: 1 hour

Max. Marks: 20

Min Marks: 08

Internal Examination:

1. The maximum marks of each paper shall be 20. The minimum passing marks shall be 8. In all papers except “Project” it will consist of two parts: a test (10 marks) and an internal assessment (10 marks).
2. The format or pattern of the test can be decided by the department.
3. The internal assessment shall be of maximum marks 10. This part shall be based on the performance of students in the assignments/seminars/quiz etc. In case of assignments, the teacher will give at least five assignments distributed over the entire course contents. These will be submitted by the students to the teacher for evaluation and submit awards. In Laboratory/Practical papers, internal assessment shall be done by checking the record of practical or organizing a quiz during classes or may academically rationale method decided by the department.
4. In the paper entitled “Project”, student will submit a report on the progress of the work done during the semester to the Head. The report will be routed through the Mentor with his grading who will also award the internal marks of the “Project”.
5. Students have to independently pass in the internal examination of each paper.
6. The marks awarded in the internal examination shall not be counted to calculate and award the final score, SGPA and the CGPA.

MOHANLAL SUKHADIA UNIVERSITY, UDAIPUR

M.Sc./M.A. (Two Years Degree Program)

Subject: MATHEMATICS

End of Semester (EoS) Examination pattern of Practical Exam.:

Duration: 4 hours

Max. Marks: 80

Min Marks: 32

The examination shall be of four hours wherein the students have to perform any two practical's selecting one from each part. The marks distribution shall be the following.

1. Two Practical's (Formation, coding and execution): 50 Marks (25 + 25)
2. Viva Voce: 20 Marks
3. Evaluation of the record book of practical's performed in the semester: 10 Marks