

# **DIRECTORATE OF** DISTANCE & ONLINE EDUCATION

MASTER OF SCIENCE (MATHAMATICS)

COURSE BROCHURE (2025-26)

### INTRODUCTION

Master of Science in Mathematics (M.Sc. Mathematics) through online mode is a postgraduate program that focuses on advanced mathematical concepts and theories. This program is designed to help students develop a deep understanding of various mathematical principles and their applications in diverse fields such as engineering, physics, computer science, and finance. The curriculum includes topics such as advanced calculus, algebra, topology, number theory, and probability theory, among others. Students pursuing M.Sc. in Mathematics learn how to use mathematical models to solve real-world problems and develop critical thinking and analytical skills. Graduates of this program are well-equipped to pursue careers in academia, research, data analysis, finance, and many other fields that require strong quantitative skills.

M.Sc. Mathematics students are trained to work independently and collaboratively on research projects, helping them to develop valuable teamwork and communication skills. They are exposed to modern mathematical tools and techniques, such as computer simulations and programming languages, which further enhances their problem-solving abilities. This program also encourages students to apply their knowledge in practical settings, allowing them to develop innovative solutions to complex problems. This is a challenging and rewarding program that provides students with a strong foundation in mathematics and prepares them for a wide range of exciting career opportunities.

#### MISSION:

- To cater and ensure excellent theoretical and practical training through teaching, counselling, and mentoring with a view to achieve professional and academic excellence.
- To connect with industry and incorporating knowledge for research enhancement.
- To generate, disseminate and preserve knowledge for the benefit and betterment of society.



## **OBJECTIVES:**

M.Sc. in Mathematics programme through online mode aims to provide students with advanced mathematical skills and knowledge in areas such as algebra, analysis, topology, geometry, and applied mathematics. The programme aims to develop students' skills in mathematical analysis, problem-solving, logical reasoning, and critical thinking. Additionally, it offers advanced coursework in specialized areas of mathematics such as algebra, topology, geometry, number theory, and applied mathematics. The programme also aims to provide students with the skills required to carry out independent research in mathematics, including skills in literature review, mathematical modelling, data analysis, and technical writing. Furthermore, the program prepares students for further studies in mathematics, including Ph.D. programmes or research-based careers in academia, industry, or government. Ultimately, the programme aims to prepare students for a wide range of career opportunities, including roles in academia, research, industry, finance, technology, and government, by providing them with the necessary skills and knowledge to succeed in these fields.

#### **INSTRUCTIONAL DESIGN**

The program is divided into four semester sand minimum credit requirement is 80 to get M.Sc. (Mathematics) degree in OL mode from Mangalayatan University. Minimum time period for acquiring M.Sc. (Mathematics) degree will be two years and maximum time period to acquire is 4 years.

SEMESTER - I								
S.No.	Course Code	Course	Course Credit Continuous Assessment		Term End Exam	Grand Total		
		Theory		MAX	MAX			
1	MMM-6111	Abstract Algebra	4	30	70	100		
2	MMM-6112	Classical Mechanics	4	30	70	100		
3	MMM-6113	Partial Differential Equations	4	30	70	100		
4	MMM-6114	Real Analysis	4	30	70	100		
5	MMM-6115	Differential Geometry	4	30	70	0 100 0		
TOTAL			20	150	350	500		



SEMESTER - II							
S.No.	Course Code	Course	Credit	Continuous Assessment	Term End Exam	Grand Total	
		Theory		MAX	MAX .		
1	MMM-6211	Operations Research	4	30	70	100	
2	MMM-6212	General Topology	4	30	70	. 100.	
3	MMM-6213	Complex Analysis	4	30	70	. 100.	
4	MMM-6214	Numerical Methods	4	30	70	100	
5	MMM-6215	Programming in C	2	30	70	100.	
6	MMM-6251	Programming in C Lab	2	30	100 .	. 100.	
TOTAL			20	180	450	. 600.	

	SEMESTER - III							
S.No.	Course Code			Term End Exam	Gr	Grand Total		
		Theory		MAX	MAX 。	•	0 0 0	
1	MMM-7111	Advanced linear Algebra	4	30	70	•	100	
2	MMM-7112	Research Methodology	4	30	70		100	
3	MMM-7113	Functional Analysis	4	30	70		100	
4	MMM-7114	Mathematical Methods	4	30	70		100	
5	MMM-7115	Measure Theory	4	30	70		100	
TOTAL			20	150	350		500	

SEMESTER - IV							
S.No.	Course Code	Course	Credit	Continuous Assessment	Term End Exam	Grand Total	
		Theory		MAX	MAX	0 0 0	
1	MMM-7211	Fluid Dynamics	4	30	70	100	
2	MMM-7212	Graph Theory	4	30	70	100	
3	MMM-7214	Advanced Number Theory	4	30	70	100	
4	MMM-7215	Mathematical Statistics	4	30	70	100	
5	MMM-7291	Project	4	30	100	100	
TOTAL			20	120	380	500	



#### SYLLABI AND COURSE MATERIALS

Syllabi, PPR and self-learning materials are developed mostly by experienced faculty members of Mangalayatan University in consultation with content experts and the same will be forwarded to CIQA and Board of Studies/Academic Council/ Executive Council for further suggestions and approval.

#### STUDY MATERIAL

The study material in digital format (e – content) of the programme shall be supplied to the students unit - wise for every course.

#### **VIDEO LECTURES**

The Video lectures as prescribed by the UGC Regulation shall be made available on the LMS portal of the University.

#### **ONLINE COUNSELLING SESSIONS**

The online counselling sessions shall be scheduled beforehand by the Subject Coordinator and informed to the learners. There shall be 6 online counselling sessions / contact classes of 1 hours each for a 4 credit course, held on Saturdays and Sundays. In case of 2 credits course there shall be 4 sessions of 1 hours each and in case of 6 credits course there shall be 8 sessions of 1 hours each.

#### **MEDIUM OF INSTRUCTION**

Medium of Course Instruction: English
Medium of Examination: English



#### STUDENT SUPPORT SYSTEMS

The university will appoint programme coordinators, course coordinator and course mentors to facilitate the learners in their learning.

Finally, The university has made appropriate arrangements for various support services including online counselling and resource-oriented-services, evaluation methods for both on and off line modes for easy and smooth services to the students' through online mode.

## PROCEDURE FOR ADMISSIONS, CURRICULUM, TRANSACTION AND EVALUATION

FEE STRUCTURE								
Name of the Program	Degree	Duration	One Time	Semester	Exam Fee	Full Year	Total	
			Reg. Fee	Fee	Per Semester	Fee	Fees	
Master of Science	PG	2 Years	1000	12000	1500	28000	55000	
(Mathematics)						• • •	• • •	
Total						55000		

ACTIVITY SCHEDULE							
		Tentative months schedule (specify months) during ye					
S.NO.	Name of the Activity	From(Month)	To (Month)	From(Month)	To (Month)		
1	Admission	Jul	Sep	Jan	Mar		
2	Assignment submission (if any)	Sep	Oct	Mar	Apr		
3	Evaluation of Assignment	Oct	Nov	Apr	May		
4	Examination	Dec	Dec	Jun	Jun		
5	Declaration of Result	Jan	Jan	Jul	Jul		
6	Re-registration	Jul	Jul	Jan	Jan		
7	Distribution of SLM	Jul	Sep	Jan	Mar		
8	Contact Programmes	Sep	Nov	Mar	May		
	(counselling, Practicals.etc.)						

<sup>\*</sup> These dates are tentative. Final dates will be informed well in advance on your LMS.



CREDIT SYSTEM							
Duration of the Programme	Credits	Name of the Programme	Level of the Programme				
2 to 4 Yrs.	80	M.Sc. (Mathematics)	Master's Degree				

#### WHY ONLINE EDUCATION?

- Comfortable and Flexible.
- · Convenience of attending classes from home.
- Cost Effective.
- · Time saving.
- No commuting.
- · Monetary benefits- No textbooks required.
- · Repeated access to the same lecture.
- · Study anytime, anywhere.
- · Write proctored exam from home

#### **ADMISSION PROCESS**

- · Register with Mangalayatan Online Programs
- Pay Registration fees through our available payment gateways
- · Upload relevant documents and mark sheets
- · Get provisional admission
- · Pay semester fees
- Get admission confirmation from University
- · Roll number allotted to every student
- LMS id and password creation.





## **Contact Us**

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