

**COMSATS Institute of Information Technology**  
**Registrar Office Principal Seat, Islamabad**

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No: CIIT-Reg/Notif-333/16/364

January 21, 2016

**NOTIFICATION**

The Academic Council in its 24<sup>th</sup> meeting held on December 01, 2015 approved the Scheme of Studies of Master of Mathematics (M.Sc), effective from Spring 2016:


**Nomenclature of the program: Master of Mathematics (M.Sc)**

1. **Minimum Duration:**  
a) No. of years: 02  
b) No. of semesters: 04

	<u>Min No. of Courses</u>	<u>Min No. of Credit Hours</u>
2. <b>Course Work</b>		
i) Core Courses (List attached)	14	42
ii) Elective Courses (List attached)	06	18
iii) Project Report	01	6
3. <b>Total credit hours of program</b>		66

**Note:**

- The "MTH499 Project Report" will be split over minimum two semesters and the credit hours will equal distributed in both semesters.
- "MTH499 Project Report" will not be offered/ registered earlier than 3<sup>rd</sup> semester.
- The Regulations relating to undergraduate degree programs approved by the Competent Authority and amended from time to time shall also be applicable to this program.

  
Nadeem Uddin Qureshi  
Additional Registrar

**Distribution:**

1. All Directors, CIIT Campuses
2. In-charge, CIIT Islamabad Campus
3. All Deans, CIIT System
4. All Chairpersons of the Faculty of Science, CIIT
5. Controller of Examinations, CIIT
6. All HoDs/In-charges of Academics/Examinations Sections, CIIT. Campuses

**CC:**

1. PS to Rector
2. PA to Registrar

## Core Courses

SR#	Course Code	Course Title	Credit Hours
1	MTH105	Multi Variable Calculus	3(3, 0)
2	MTH251	Set Topology	3(3, 0)
3	MTH321	Real Analysis I	3(3, 0)
4	MTH322	Real Analysis II	3(3, 0)
5	MTH324	Complex Analysis	3(3, 0)
6	MTH327	Functional Analysis	3(3, 0)
7	MTH343	Partial Differential Equations	3(3, 0)
8	MTH352	Differential Geometry	3(3, 0)
9	STA365	Mathematical Statistics	3(3, 0)
10	MTH374	Optimization	3(3, 0)
11	MTH375	Numerical Computations	3(3, 0)
12	MTH376	Algebra	3(3, 0)
13	MTH382	Analytical Dynamics	3(3, 0)
14	MTH487	Continuum Mechanics	3(3, 0)

## Project

1.	MTH499	Project Report	3(3, 0) in 3 <sup>rd</sup> Semester)
		Project Report	3(3, 0) in 4 <sup>th</sup> Semester)

## Elective Courses

1.	MTH414	Galois Theory	3(3, 0)
2.	MTH415	Rings and Modules	3(3, 0)
3.	MTH423	Advanced Complex Analysis	3(3, 0)



4.	MTH424	Convex Analysis	3(3, 0)
5.	MTH425	An Introduction to Geometric Function Theory	3(3, 0)
6.	MTH426	Introduction to Measure Theory	3(3, 0)
7.	MTH427	Introduction to Hilbert Spaces	3(3, 0)
8.	MTH435	Analytical Number Theory	3(3, 0)
9.	MTH442	Graph Theory	3(3, 0)
10.	MTH462	Advanced Numerical Analysis	3(3, 0)
11.	MTH463	Numerical Solutions of Differential Equations	3(3, 0)
12.	MTH464	Numerical Optimization	3(3, 0)
13.	MTH465	Topics in Scientific Computing	3(3, 0)
14.	MTH466	Approximation Theory	3(3, 0)
15.	MTH467	Operations Research	3(3, 0)
16.	MTH468	Non Linear Optimization	3(3, 0)
17.	MTH470	Mathematical Statistics-II	3(3, 0)
18.	MTH471	Integral Equations	3(3, 0)
19.	MTH472	Riemannian Geometry	3(3, 0)
20.	MTH473	Continuous Groups	3(3, 0)
21.	MTH474	Theory of Manifolds	3(3, 0)
22.	MTH475	Introduction to Combinatorics	3(3, 0)
23.	MTH476	Algebraic systems and Coding Theory	3(3, 0)
24.	MTH477	Algebraic Topology	3(3, 0)

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25.	MTH478	Special Relativity	3(3, 0)
26.	MTH479	General Relativity	3(3, 0)
27.	MTH480	Introductory Quantum Mechanics	3(3, 0)
28.	MTH481	Advanced Functional Analysis	3(3, 0)
29.	MTH483	Mathematical Methods of Physics	3(3, 0)
30.	MTH484	Variational Inequalities	3(3, 0)
31.	MTH485	Calculus of Variation	3(3, 0)
32.	MTH486	Fluid Mechanics	3(3, 0)
33.	MTH488	Elasticity	3(3, 0)
34.	MTH489	Control Theory	3(3, 0)
35.	MTH491	Micro-Economics (Financial Mathematics)	3(3, 0)
36.	MTH493	Elements of Electromagnetic Theory	3(3, 0)
37.	MTH494	Sampling and Design Analysis	3(3, 0)

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