

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

No: CIIT-Reg/Notif/47/12/971

July 3, 2012

NOTIFICATION

Scheme of Studies of Bachelor of Science (BS) in Mathematics


It is hereby notified that the Academic Council in its 13th meeting held on June 04, 2012 approved the following scheme of studies of Bachelor of Science (BS) in Mathematics program with effect from Fall 2012 at CIIT system:

i. Minimum Duration:	04 Years	
ii. Minimum No. of Semesters:	08	
iii. No. of Credit Hours in each Semester:	15-19	
iv. Course Work	<u>Min No. of Courses</u>	<u>Min No. Credit Hours</u>
i. Core Courses (List attached)	35	109
ii. Elective Courses (List attached)	08	24
Total No. of Courses:	43	
Total No. of Credit Hours:		133

Note:

The regulations relating to undergraduate degree programs approved by the competent authority and amended from time to time shall be applicable.

This issues with the approval of the Competent Authority.


Nadeem Uddin Qureshi
Additional Registrar

Encl: (pages 03 in total including this page)

Distribution:

1. Dean Faculty of Science, CIIT
2. All Directors, CIIT System
3. Chairperson, Department of Mathematics, CIIT
4. Incharge, CIIT Islamabad Campus.
5. All Incharges, Academic Sections, CIIT Campuses
6. All HoD's/Incharges, Department of Mathematics, CIIT Campuses
7. Controller of Examinations, CIIT
8. All Incharges, Examination Departments, CIIT Campuses

CC:

1. PS to Rector
2. PA to Registrar

LIST OF CORE COURSES

Sr. #	Course Code	Course Title	Credit Hours	Pre-requisites
1.	CSC101	Introduction to Computing	3(3, 0)	
2.	CSC111	Algorithms	3(3, 0)	
3.	CSC141	Introduction to Computer Programming	4(3, 1)	CSC101
4.	ENV101	Fundamentals of Environmental Sciences	3(3, 0)	
5.	HUM100	English Comprehension and Composition	3(3, 0)	
6.	HUM102	Report Writing Skills	3(3, 0)	HUM100
7.	HUM103	Communication Skills	3(3, 0)	HUM100
8.	HUM110	Islamic Studies	3(3, 0)	
9.	HUM111	Pakistan Studies	3(3, 0)	
10.	HUM220	Introduction to Psychology	3(3, 0)	
11.	HUM221	International Relations	3(3, 0)	
12.	HUM310	Islamic History	3(3, 0)	
13.	MTH101	Calculus I	3(3, 0)	
14.	MTH102	Calculus II	3(3, 0)	MTH101
15.	MTH112	Set Theory and Logic	3(3, 0)	
16.	MTH203	Calculus III	3(3, 0)	MTH102
17.	MTH231	Linear Algebra	3(3, 0)	
18.	MTH232	Abstract Algebra	3(3, 0)	
19.	MTH241	Ordinary Differential Equations	3(3, 0)	MTH102
20.	MTH251	Set Topology	3(3, 0)	
21.	MTH281	Mechanics	3(3, 0)	MTH203
22.	MTH321	Real Analysis I	3(3, 0)	
23.	MTH322	Real Analysis II	3(3, 0)	MTH321
24.	MTH324	Complex Analysis	3(3, 0)	
25.	MTH327	Functional Analysis	3(3, 0)	
26.	MTH343	Partial Differential Equations	3(3, 0)	MTH241
27.	MTH344	Special Functions	3(3, 0)	
28.	MTH352	Differential Geometry	3(3, 0)	
29.	MTH374	Optimization	3(3, 0)	
30.	MTH375	Numerical Computations	3(3, 0)	MTH102
31.	MTH382	Analytical Dynamics	3(3, 0)	MTH281
32.	MTH499	Project Report	6(6, 0)	
33.	PHY102	Newtonian Mechanics	3(3, 0)	
34.	PHY122	Electricity and Magnetism	3(3, 0)	PHY102
35.	STA365	Mathematical Statistics	3(3, 0)	MTH102

LIST OF ELECTIVE COURSES

The student will register the elective courses in consultation with their respective supervisor.

Sr. #	Course Code	Course Title	Credit Hours
1	MTH414	Galoise 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)
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	MTH484	Variational Inequalities	3(3, 0)
30	MTH485	Calculus of Variation	3(3, 0)
31	MTH486	Fluid Mechanics	3(3, 0)
32	MTH487	Continuum Mechanics	3(3, 0)
33	MTH488	Elasticity	3(3, 0)
34	MTH489	Control Theory	3(3, 0)
35	MTH491	Micro Economic (Financial Mathematics)	3(3, 0)
36	MTH493	Elements of Electromagnetic Theory	3(3, 0)
37	MTH494	Sampling & Design Analysis	3(3, 0)
38	MTH495	Topics in Pure Mathematics	3(3, 0)
39	MTH496	Topics in Applied Mathematics	3(3, 0)
40	MTH497	Topics in Numerical Mathematics	3(3, 0)
41	MTH498	Topics in Statistics	3(3, 0)

Included