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

July 3, 2012

NOTIFICATION

Scheme of Studies of Master of Science (MS) in Bioinformatics

It is hereby notified that the Academic Council in its 13th meeting held on June 04, 2012 approved the following scheme of studies of Master of Science (MS) in Bioinformatics program for session Fall 2012 only at CIIT system:

		Minimum No. of Courses	Minimum No. of Credit Hours
1.	**MS Course Work**		
i.	Core Courses (list attached)	02	08
ii.	Elective Courses (list attached)	4-8	16
	Total Credit Hours of course work		24
2.	**MS Thesis**		06
3.	**Total Credit Hours of the Program**		30

4. All Rules and Regulations approved by BASAR from time to time shall be applicable

This issue with approval of the Competent Authority.

Nadeem Uddin Qureshi
Additional Registrar

Encl: (3 pages in all including this page)

Distribution:
1. Dean Faculty of Science, CIIT.
2. Chairperson, Department of Biosciences, CIIT.
3. Incharge, CIIT Islamabad Campus.
4. Incharge Academics, CIIT Campuses.
5. All HoDs Department of Biosciences, CIIT, Campuses.
6. Controller of Examinations, CIIT.
7. Incharge Examinations, CIIT Campuses.

CC:
1. PS to Rector
2. PA to Registrar

List of Core Courses

Course Code	Course Title	Credits Hours
BIO605	Bioinformatics	4(3, 1)
BIO612	Biostatistics for Bioinformatics	4(3, 1)

Thesis

Course Code	Course Title	Credits Hours
BIO800	Thesis	6

Electives I (Biosciences)

Course Code	Course Title	Credit Hours
BIO601	Advances in Molecular Biology	4(4, 0)
BIO603	Molecular Genetics	4(4, 0)
BIO610	Applications of Bioinformatics	4(3, 1)
BIO614	Principles of Computational Biology	4(3, 1)
BIO702	Gene Regulation and Expression	4(4, 0)
BIO704	Trends in Genomics	4(4, 0)
BIO705	Nucleic Acids	4(4, 0)
BIO706	Protein Chemistry	4(4, 0)
BIO708	Advances in Molecular Genetics	4(4, 0)
BIO740	Concepts in Systems Biology	4(4, 0)
BIO742	Principles and Applications of Proteomics	4(3, 1)
BIO743	Special Topics in Bioinformatics	2(2, 0)
BIO744	Systems Biology of Microorganism	2(1, 1)

Electives II (Computer Science and Mathematics)

Course Code	Course Title	Credit Hours
CSC503	Stochastics Processes	3(3, 0)
CSC511	Advanced Algorithms and Analysis	3(3, 0)
CSC557	Data Structures for Computer Graphics	3(3, 0)
CSC601	Mathematical Modeling	3(3, 0)
MTH602	Optimization Theory	3(3, 0)
MTH613	Advanced Mathematical Statistics	3(3, 0)
CSC650	Advanced Digital Image Processing	3(3, 0)
CSC651	Pattern Recognition Techniques	3(3, 0)
CSC662	Artificial Neural Networks	3(3, 0)
CSC665	Knowledge Based Systems	3(3, 0)
CSC672	Data Warehousing and Data Mining	3(3, 0)

CSC674	Object Oriented Databases	3(3, 0)
CSC675	Web Based Databases	3(3, 0)
CSC693	Software Project Management	3(3, 0)