

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

No: CIIT-Reg/Notif-~~669~~/12/993

July 3, 2012

NOTIFICATION

Scheme of Studies of Bachelor of Science (BS) 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 Bachelor of Science (BS) in Bioinformatics program w.e.f Fall 2012 at CIIT system:

- | | |
|--|----------|
| 1. Minimum Duration: | 04 Years |
| 2. Minimum No. of Semesters: | 08 |
| 3. No. of Credit Hours in each Semester: | 12-19 |

4. Course Work	<u>Min No. of Courses</u>	<u>Min No. of Credit Hours</u>
i. Core Courses (List attached)	36	130
ii. Institutional Elective Courses (List attached)	03	09
Total No. of Courses of the Program:	39	
Total No. of Credit Hours of the Program:		139

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 approval of the Competent Authority.


Nadeem Uddin Qureshi
Additional Registrar

Encl: (3 pages including this page)

Distribution:

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

CC:

1. PS to Rector
2. PA to Registrar

List of Core Courses:

Serial No.	Course Code	Course Title	Cr. Hrs.	Pre-requisites
1.	BIO111	Bioinformatics Colloquium	1(1, 0)	
2.	BIO130	Cell Biology	4(3, 1)	
3.	BIO132	Principles of Biochemistry I	4(3, 1)	
4.	BIO210	Linux for Biological Sciences	3(1, 2)	
5.	BIO221	Biotechnology I	4(3, 1)	BIO240
6.	BIO231	Fundamentals of Genetics	4(3, 1)	
7.	BIO233	Developmental Biology	4(3, 1)	
8.	BIO234	Principles of Biochemistry II	3(3, 0)	BIO132
9.	BIO240	Introductory Molecular Biology	3(3, 0)	BIO132
10.	BIO251	Microbiology and Immunology	4(3, 1)	
11.	BIO310	Introduction to Bioinformatics	4(3, 1)	
12.	BIO312	Bioinformatics Analysis	4(3, 1)	BIO310
13.	BIO333	Statistical Methods in Biology	3(3, 0)	
14.	BIO346	Introduction to Genomics and Proteomics	3(3, 0)	BIO240
15.	BIO350	Bioinformatics Database Development	4(3, 1)	BIO310
16.	BIO400	Bioinformatics Scripting	3(1, 2)	
17.	BIO413	Structural and Functional Bioinformatics	4(3, 1)	BIO312
18.	BIO415	Independent Research Project/Internship	12(0, 12)	
19.	BIO424	Bioinformatics Software Development	3(2, 1)	
20.	BIO435	Biological Modeling and Simulation	3(3, 0)	
21.	CSC101	Introduction to Computing	3(2, 1)	
22.	CSC141	Introduction to Computer Programming	4(3, 1)	CSC101
23.	CSC211	Data Structures	4(3, 1)	CSC141
24.	CSC241	Object Oriented Programming	4(3, 1)	CSC141
25.	CSC336	Web Engineering	4(3, 1)	
26.	CSC445	Modern Programming Languages	4(3, 1)	CSC141
27.	CSC462	Artificial Intelligence	3(2, 1)	CSC141
28.	HUM100	English Comprehension and Composition	3(3, 0)	
29.	HUM102	Report Writing Skills	3(3, 0)	HUM100
30.	HUM103	Communication Skills	3(3, 0)	HUM100
31.	HUM110	Islamic Studies	3(3, 0)	
32.	HUM111	Pakistan Studies	3(3, 0)	
33.	MTH100	Mathematics I	3(3, 0)	
34.	MTH101	Calculus I	3(3, 0)	
35.	MTH211	Discrete Mathematics	3(3, 0)	
36.	MTH262	Statistics and Probability Theory	3(3, 0)	

List of Institutional Elective Courses

Serial No.	Course Code	Course Title	Cr.Hrs.	Pre-requisite
1.	ECO102	Economics	3(3, 0)	
2.	ECO200	Introduction to Development Economics	3(3, 0)	
3.	ECO300	Engineering Economics	3(3, 0)	
4.	HUM200	Business Communication Workshop	3(3, 0)	HUM100
5.	HUM202	Creative Thinking and Decision Making	3(3, 0)	
6.	HUM220	Introduction to Psychology	3(3, 0)	
7.	HUM221	International Relations	3(3, 0)	
8.	HUM223	Introduction to Philosophy	3(3, 0)	
9.	HUM310	Islamic History	3(3, 0)	
10.	HUM320	Introduction to Sociology	3(3, 0)	
11.	HUM430	French	3(3, 0)	
12.	HUM431	German	3(3, 0)	
13.	HUM432	Arabic	3(3, 0)	
14.	HUM433	Persian	3(3, 0)	
15.	LAW300	Corporate Law	3(3, 0)	
16.	MGT100	Introduction to Business	3(3, 0)	
17.	MGT101	Introduction to Management	3(3, 0)	
18.	MGT131	Financial Accounting	3(3, 0)	
19.	MGT403	Entrepreneurship	3(3, 0)	MGT101
20.	*MGT461	Project Management	3(3, 0)	
21.	MGT463	Productivity and Quality Management	3(3, 0)	MGT101
22.	MGT513	New Product Development	3(3, 0)	

*No pre requisite course is required for the institutional elective course "MGT461 Project Management" for students of Bachelor of Science in Bioinformatics.