COMSATS Institute of Information Technology
Registrar Office, Principal Seat, Islamabad
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No: CIIT-Reg/Notif-920/12/1385   September 27, 2012

Scheme of Studies of Bachelor of Science (BS) in Electrical (Telecommunication) Engineering, BS(ETE)

NOTIFICATION

It is hereby notified that the Board of Studies for Electrical Engineering in its 17th meeting held on September 10, 2012 approved the following scheme of studies of Bachelor of Science (BS) in Electrical (Telecommunication) Engineering, BS(ETE) with effect from Fall 2012 at CIIT Lahore Campus only:

i.	Minimum Duration:	04 Years
ii.	Minimum No. of Semesters:	08
iii.	No. of Credit Hours in each Semester:	(14-20)
iv.	**Core Courses Requirement:**	
	a. Engineering Courses	24 (87 Credit Hours)
	b. Non-Engineering Courses	12 (37 Credit Hours)
v.	**Elective Courses Requirement:***	
	a. Major/Specialization Electives* *	02 (06-08 Credit Hours)
	b. Non-Engineering Electives	01 (03 Credit Hours)
	c. EE Open or Major/Specialization Elective	01 (03-04 Credit Hours)
vi.	**Total No. of Courses:**	40
vii.	**Total No. of Credit Hours:**	136-139

Note:
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.

This issues with the approval of the Competent Authority and in anticipation to the approval of the Board of Faculty of Engineering.

Muhammad Hanif
Deputy Registrar

Encl: Pages 5 including this page.

Distribution:
1. Dean, Faculty of Engineering, CIIT.
2. Dean of Research, Innovation and Commercialization (DORIC), CIIT.
3. Director, CIIT Lahore Campus.
4. Chairman, Department of Electrical Engineering, CIIT.
5. Incharge, Academic Section, CIIT Lahore Campus.
6. HoD/Incharge, Department of Electrical Engineering, CIIT Lahore Campus.
7. Controller of Examinations, CIIT.
8. Incharge, Examination Department, CIIT Lahore Campus.

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

viii. **List of Core Courses:**

a. List of Engineering Courses:

Serial No	Course Code	Course Title	Credits Hours"	Prerequisite(s) +
1	CSC141	Introduction to Computer Programming	4(3, 1)	
2	CSC241	Object Oriented Programming	4(3, 1)	CSC141
3	CSC112	Algorithms and Data Structures	4(3, 1)	CSC141
4	EEE113	Engineering Drawing	1(0, 1)	
5	EEE112	Engineering Mechanics and Thermodynamics	3(3, 0)	
6	EEE121	Electric Circuits Analysis I	4(3, 1)	PHY121
7	EEE222	Electric Circuits Analysis II	4(3, 1)	MTH242, EEE121
8	EEE241	Digital Logic Design	4(3, 1)	
9	EEE231	Electronics I	4(3, 1)	EEE121
10	EEE232	Electronics II	4(3, 1)	EEE231
11	EEE261	Electromagnetic Theory	3(3, 0)	MTH105
12	EEE251	Probability Methods in Engineering	3(3, 0)	MTH104, MTH231
13	EEE223	Signals and Systems	4(3, 1)	MTH242
14	EEE375	Power Distribution and Utilization	3(3, 0)	
15	EEE371	Electric Machines	4(3, 1)	EEE222
16	EEE325	Control Systems	4(3, 1)	EEE223
17	EEE342	Microprocessor Systems and Interfacing	4(3, 1)	EEE241
18	EEE314	Data Communication and Computer Networks	4(3, 1)	
19	EEE324	Digital Signal Processing	4(3, 1)	EEE223
20	EEE352	Analog Communication Systems	4(3, 1)	EEE223, EEE251
21	EEE353	Digital Communication Systems	4(3, 1)	EEE352
22	EEE463	Antenna and Radio Wave Propagation	4(3, 1)	EEE261
23	EEE490	Final Year Project (Part I)**	1(0, 1)	
24	EEE490	Final Year Project (Part II)**	5(0, 5)	

b. List of Non-Engineering Courses:

Serial No	Course Code	Course Title	Credits Hours"	Prerequisite(s) +
1	PHY121	Applied Physics for Engineers	4(3, 1)	
2	HUM100	English Comprehension and Composition	3(3, 0)	
3	HUM102	Report Writing Skills	3(3, 0)	HUM100
4	ECO300	Engineering Economics	3(3, 0)	
5	MGT462	Project Planning and Management	3(3, 0)	
6	HUM110	Islamic Studies	3(3, 0)	
7	HUM111	Pakistan Studies	3(3, 0)	
8	MTH104	Calculus and Analytic Geometry	3(3, 0)	
9	MTH105	Multivariable Calculus	3(3, 0)	MTH104
10	MTH231	Linear Algebra	3(3, 0)	
11	MTH242	Differential Equations	3(3, 0)	MTH104
12	MTH375	Numerical Computations	3(2, 1)	MTH104, MTH231, CSC141

c. **List of Elective Courses***

i. List of Major/Specialization Electives:*

Serial No.	Course Code	Course Title	Credits Hours"	Prerequisite(s) †
1	EEE354	Telecommunication Systems Engineering	3(3, 0)	EEE352
2	CSC341	Network Programming	4(3, 1)	CSC141, EEE314
3	EEE454	Transmission & Switching Systems	3(3, 0)	EEE353
4	EEE464	Wireless Communication Systems	3(3, 0)	EEE351 or EEE352
5	EEE362	Microwave Engineering	4(3, 1)	EEE232, EEE261
6	EEE455	Optical Fiber Communications	3(3, 0)	EEE362
7	EEE456	Broadband Technologies	3(3, 0)	EEE314
8	EEE465	Microwave & Satellite Communication Systems	3(3, 0)	EEE353
9	EEE466	Radars and Navigation Aids	3(3, 0)	EEE463
10	EEE467	Telecommunication Policies Standards & Regulations	3(3, 0)	
11	EEE415	Digital Image Processing	4(3, 1)	MTH231,EEE223

ii. List of Non-Engineering Electives:*

Serial No	Course Code	Course Title	Credits Hours"	Prerequisite(s) †
1	LAW300	Corporate Law	3(3, 0)	
2	MGT403	Entrepreneurship	3(3, 0)	
3	MGT131	Financial Accounting	3(3, 0)	
4	MGT330	Financial Management	3(3, 0)	
5	MGT350	Human Resource Management	3(3, 0)	
6	MGT450	HRM Policies and Practices	3(3, 0)	
7	MGT460	Operations Management	3(3, 0)	
8	MGT522	Marketing of IT and Telecom Products	3(3, 0)	
9	HUM202	Creative Thinking and Decision Making	3(3, 0)	
10	HUM220	Introduction to Psychology	3(3, 0)	
11	HUM200	Business Communication Workshop	3(3, 0)	HUM100
12	HUM320	Introduction to Sociology	3(3, 0)	
13	HUM400	Business Communication	3(3, 0)	
14	MTH374	Optimization	3(3, 0)	MTH102
15	MTH467	Operations Research	3(3, 0)	MTH102

iii. List of EE Open or Major/Specialization Elective

There is no separate list. With the consent of Academic Advisor, Project Supervisor & Course Instructor, the students can take any approved course of EE which he/she has not taken before including the electives of (Telecommunications, Power, Computer, Electronics) according to his/her aptitude/future plans and further requirement (if any) of his/her final year project.

*   The list of Electives may be revised from time to time and will be offered by the department subject to the availability of the faculty.

!!   03 credit hours of theory is equivalent to 3 hours of lectures whereas 01 credit hour of lab is equivalent to 03 hours of lab session. All the lab sessions are graded. Students have to pass both theory and lab to earn the course credits.

†   Courses with prerequisites can only be allowed if all prerequisite courses have been passed.

‡   Student must clear all the engineering subjects in the first five semesters to be eligible for Final year project.

Tentative Plan of Studies

The course offering in each semester as given below is not fixed; it may vary depending on the availability of faculty and needs of the students.

Semester 1

Course Code	Course Title	Credit Hours	Prerequisite(s)
HUM100	English Comprehension and Composition	3(3, 0)	
HUM110	Islamic Studies	3(3, 0)	
PHY121	Applied Physics for Engineers	4(3, 1)	
MTH104	Calculus and Analytic Geometry	3(3, 0)	
EEE113	Engineering Drawing	1(0, 1)	
EEE112	Engineering Mechanics and Thermodynamics	3(3, 0)	
		17(15, 2)	

Semester 2

Course Code	Course Title	Credit Hours	Prerequisite(s)
HUM111	Pakistan Studies	3(3, 0)	
MTH105	Multivariable Calculus	3(3, 0)	MTH104
CSC141	Introduction to Computer Programming	4(3, 1)	
EEE121	Electric Circuits Analysis I	4(3, 1)	PHY121
MTH231	Linear Algebra	3(3, 0)	
		17(15, 2)	

Semester 3

Course Code	Course Title	Credit Hours	Prerequisite(s)
MTH242	Differential Equations	3(3, 0)	MTH104
EEE241	Digital Logic Design	4(3, 1)	
MTH375	Numerical Computations	3(2, 1)	MTH104, MTH231, CSC141
EEE231	Electronics I	4(3, 1)	EEE121
CSC241	Object Oriented Programming	4(3, 1)	CSC141
		18(14, 4)	

Semester 4

Course Code	Course Title	Credit Hours	Prerequisite(s)
EEE251	Probability Methods in Engineering	3(3, 0)	MTH104, MTH231
EEE222	Electric Circuits Analysis II	4(3, 1)	MTH242, EEE121
EEE261	Electromagnetic Theory	3(3, 0)	MTH105
EEE223	Signals and Systems	4(3, 1)	MTH242
EEE375	Power Distribution and Utilization	3(3, 0)	
		17(15, 2)	

Semester 5

Course Code	Course Title	Credit Hours	Prerequisite(s)
EEE232	Electronics II	4(3, 1)	EEE231
EEE371	Electric Machines	4(3, 1)	EEE222
CSC112	Algorithms and Data Structures	4(3, 1)	CSC141
EEE324	Digital Signal Processing	4(3, 1)	EEE223
EEE352	Analog Communication Systems	4(3, 1)	EEE223, EEE251
		20(15, 5)	

Semester 6

Course Code	Course Title	Credit Hours	Prerequisite(s)
ECO300	Engineering Economics	3(3, 0)	
EEE325	Control Systems	4(3, 1)	EEE223
EEE342	Microprocessor Systems and Interfacing	4(3, 1)	EEE241
EEE314	Data Communication and Computer Networks	4(3, 1)	
EEE463	Antenna and Radio Wave Propagation	4(3, 1)	EEE261
		19(15, 4)	

Semester 7

Course Code	Course Title	Credit Hours	Prerequisite(s)
HUM102	Report Writing Skills	3(3, 0)	HUM100
	Major Specialization/Elective I	3(3, 0)/4(3, 1)	
	Non-Engineering Elective	3(3, 0)	
EEE490	Final Year Project (Part I)	1(0, 1)	
EEE353	Digital Communication Systems	4(3, 1)	EEE352
		14-15(12,2-3)	

Semester 8

Course Code	Course Title	Credit Hours	Prerequisite(s)
MGT462	Project Planning and Management	3(3, 0)	
	Major Specialization/Elective II	3(3, 0)/4(3, 1)	
	EE Open/Free Elective	3(3, 0)/4(3, 1)	
EEE490	Final Year Project (Part II)	5(0, 5)	
		14-16(9,5-7)	