

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

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No: CIIT-Reg/Notif- 731/12/1656

July 04, 2012

**NOTIFICATION**

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

It is hereby notified that the Academic Council in its 13<sup>th</sup> Meeting held on June 04, 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 system:

i.	Minimum Duration:	04 Years
ii.	Minimum No. of Semesters:	08
iii.	No of Credit Hours in each Semester:	14-20
iv.	<b>Core Courses:</b>	
	a. Engineering Courses (List Attached)	21
	b. Non Engineering Courses (List Attached)	15
v.	<b>Elective courses</b>	
	c. Major Electives*	02
	d. EE Open/Free Elective***	01
	e. Non-Engineering Electives****	01
vi.	<b>Total No. of Courses:</b>	40
vii.	<b>Total Credit Hours</b>	136-139

**Note:**

The Undergraduate rules and Regulations approved /amended from time to time by the Competent Authority shall be applicable.

This issues with the approval of the Competent Authority.

  
Nadeem Uddin Qureshi  
Additional Registrar

Encl: Tentative Plan of Studies

**Distribution:**

1. Dean, Faculty of Engineering, CIIT
2. Dean of Research, Innovation and Commercialization (DORIC), CIIT
3. All Directors, CIIT System.
4. Incharge, CIIT Islamabad Campus.
5. Chairman, Department of Electrical Engineering, CIIT
6. All Incharges, Academic Sections, CIIT Campuses
7. All HoD's/Incharges, Department of Electrical Engineering, CIIT Campuses
8. Controller of Examinations, CIIT.
9. All Incharges, Examination Departments, CIIT Campuses.

**CC:**

1. PS to Rector
2. PA to Registrar

**Core Courses****List of Engineering Courses**

Sr No	Course Code	Course Title	Credit Hours <sup>1</sup>	Prerequisite(s) <sup>†</sup>
1	EEE112	Engineering Mechanics and Thermodynamics	3(3, 0)	
2	EEE113	Engineering Drawing	1(0, 1)	
3	EEE121	Electric Circuits Analysis I	4(3, 1)	MTH101,PHY121
4	EEE222	Electric Circuits Analysis II	4(3, 1)	MTH242,EEE121
5	EEE223	Signals and Systems	4(3, 1)	MTH242
6	EEE231	Electronics I	4(3, 1)	EEE121
7	EEE232	Electronics II	4(3, 1)	EEE222,EEE231
8	EEE241	Digital Logic Design	4(3, 1)	
9	EEE251	Probability Methods in Engineering	3(3, 0)	MTH102, MTH231
10	EEE261	Electromagnetic Theory	3(3, 0)	MTH203
11	EEE314	Data Communication and Computer Networks	4(3, 1)	
12	EEE324	Digital Signal Processing	4(3, 1)	EEE223
13	EEE325	Control Systems	4(3, 1)	EEE223,EEE232
14	EEE342	Microprocessor Systems and Interfacing	4(3, 1)	EEE241
15	EEE352	Analog Communication Systems	4(3, 1)	EEE223,EEE251
16	EEE353	Digital Communication Systems	4(3, 1)	EEE352
17	EEE371	Electric Machines	4(3, 1)	EEE222,EEE261
18	EEE375	Power Distribution and Utilization	3(3, 0)	
19	EEE463	Antenna and Radio Wave Propagation	4(3, 1)	EEE261
20	EEE490	Final Year Project (Part I)**	1(0, 1)	
21	EEE490	Final Year Project (Part II)**	5(0, 5)	

**List of Non-Engineering Courses**

Sr No	Course Code	Course Title	Credit Hours <sup>1</sup>	Prerequisite(s) <sup>†</sup>
1	CSC112	Algorithms and Data Structures	4(3, 1)	CSC141
2	CSC141	Introduction to Computer Programming	4(3, 1)	
3	CSC241	Object Oriented Programming	4(3, 1)	CSC141
4	ECO300	Engineering Economics	3(3, 0)	
5	HUM100	English Comprehension and Composition	3(3, 0)	
6	HUM102	Report Writing Skills	3(3, 0)	HUM100
7	HUM110	Islamic Studies	3(3, 0)	
8	HUM111	Pakistan Studies	3(3, 0)	
9	MGT462	Project Planning and Management	3(3, 0)	
10	MTH101	Calculus I	3(3, 0)	
11	MTH102	Calculus II	3(3, 0)	MTH101
12	MTH203	Calculus III	3(3, 0)	MTH102
13	MTH231	Linear Algebra	3(3, 0)	
14	MTH242	Differential Equations	3(3, 0)	MTH102
15	PHY121	Applied Physics for Engineers	4(3, 1)	

*Included*



**Bachelor of Science in Electrical Engineering with Major in Telecommunications Technical Electives\*\*\***

Course Code	Course Title	Credit Hours <sup>1</sup>	Prerequisite(s) <sup>†</sup>
EEE354	Telecommunication Systems Engineering	3(3, 0)	EEE352
EEE362	Microwave Engineering	4(3, 1)	EEE232, EEE261
CSC341	Network Programming	4(3, 1)	EEE314, CSC141
EEE454	Transmission and Switching Systems	3(3, 0)	EEE352, EEE353
EEE455	Optical Fiber Communications	3(3, 0)	EEE232, EEE362
EEE456	Broadband Technologies	3(3, 0)	EEE314, EEE354
EEE464	Wireless Communication Systems	3(3, 0)	EEE352
EEE465	Microwave and Satellite Communication Systems	3(3, 0)	EEE353
EEE466	Radars and Navigation Aids	3(3, 0)	EEE463
EEE476	Telecommunication Policies Standards and Regulations	3(3, 0)	
EEE415	Digital Image Processing	4(3, 1)	MTH231, EEE223

**List of Non-Engineering Electives\*\*\*\***

Course Code	Course Title	Credit Hours <sup>1</sup>	Prerequisite(s) <sup>†</sup>
HUM200	Business Communication Workshop	3(3, 0)	HUM100
HUM202	Creative Thinking and Decision Making	3(3, 0)	
HUM220	Introduction to Psychology	3(3, 0)	
HUM320	Introduction to Sociology	3(3, 0)	
HUM400	Business Communication	3(3, 0)	
LAW300	Corporate Law	3(3, 0)	
MGT131	Financial Accounting	3(3, 0)	
MGT330	Financial Management	3(3, 0)	
MGT350	Human Resource Management	3(3, 0)	
MGT403	Entrepreneurship	3(3, 0)	
MGT450	HRM Policies and Practices	3(3, 0)	
MGT460	Operations Management	3(3, 0)	
MGT522	Marketing of IT and Telecom Products	3(3, 0)	
MTH374	Optimization	3(3, 0)	MTH102
MTH375	Numerical Computations	3(2, 1)	MTH102, CSC141
MTH467	Operations Research	3(3, 0)	MTH102

<sup>1</sup> 3 credit hours of theory is equivalent to 3 hours of lectures whereas 1 credit hour of lab is equivalent to 3 hours of lab session. All the lab sessions are graded. Students have to pass both theory and lab to earn the course credits.

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

\* With the consent of Academic Advisor, Project Supervisor & Course Instructor, the students can select an elective course in their area of specialization according to their aptitudes and requirements of the final year project.

\*\* Students must clear all the engineering subjects in the first five semesters as given in the tentative plan to be eligible for the Final year project

\*\*\* With the consent of Academic Advisor, Project Supervisor & Course Instructor, the students can take any course of EE which he/she has not taken before (including the electives of TE, EPE, CE, EL) according to his/her aptitude/future plans and further requirement (if any) of his/her final year project.

**Note:** 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.

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## 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.

**8 Semesters**  
**136-139 Credit Hours**

### Year 1, Semester 1

Course Code	Course Title	Credit Hours <sup>1</sup>	Prerequisite(s) <sup>†</sup>
HUM100	English Comprehension and Composition	3(3,0)	
HUM110	Islamic Studies	3(3, 0)	
PHY121	Applied Physics for Engineers	4(3, 1)	
MTH101	Calculus I	3(3, 0)	
EEE113	Engineering Drawing	1(0, 1)	
EEE112	Engineering Mechanics and Thermodynamics	3(3, 0)	
	<b>Total</b>	<b>17(15, 2)</b>	

### Semester 2

Course Code	Course Title	Credit Hours <sup>1</sup>	Prerequisite(s) <sup>†</sup>
HUM111	Pakistan Studies	3(3, 0)	
MTH102	Calculus II	3(3, 0)	MTH101
MTH231	Linear Algebra	3(3, 0)	
CSC141	Introduction to Computer Programming	4(3, 1)	
EEE121	Electric Circuits Analysis I	4(3, 1)	MTH101, PHY121
	<b>Total</b>	<b>17(15, 2)</b>	

### Year 2, Semester 3

Course Code	Course Title	Credit Hours <sup>1</sup>	Prerequisite(s) <sup>†</sup>
MTH203	Calculus III	3(3, 0)	MTH102
MTH242	Differential Equations	3(3, 0)	MTH102
EEE241	Digital Logic Design	4(3, 1)	
EEE231	Electronics I	4(3, 1)	EEE121
CSC241	Object Oriented Programming	4(3, 1)	CSC141
	<b>Total</b>	<b>18(15, 3)</b>	

### Semester 4

Course Code	Course Title	Credit Hours <sup>1</sup>	Prerequisite(s) <sup>†</sup>
EEE251	Probability Methods in Engineering	3(3,0)	MTH102, MTH231
EEE261	Electromagnetic Theory	3(3, 0)	MTH203
EEE222	Electric Circuits Analysis II	4(3, 1)	MTH242, EEE121
EEE223	Signals and Systems	4(3, 1)	MTH242
EEE375	Power Distribution and Utilization	3(3, 0)	
	<b>Total</b>	<b>17(15,2)</b>	

**Year 3, Semester 5**

Course Code	Course Title	Credit Hours <sup>1</sup>	Prerequisite(s) <sup>†</sup>
EEE232	Electronics II	4(3, 1)	EEE222,EEE231
EEE371	Electric Machines	4(3, 1)	EEE222,EEE261
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
<b>Total</b>		<b>20(15, 5)</b>	

**Semester 6**

Course Code	Course Title	Credit Hours <sup>1</sup>	Prerequisite(s) <sup>†</sup>
ECO300	Engineering Economics	3(3, 0)	
EEE325	Control Systems	4(3, 1)	EEE223,EEE232
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
<b>Total</b>		<b>19(15, 4)</b>	

**Year 4, Semester 7**

Course Code	Course Title	Credit Hours <sup>1</sup>	Prerequisite(s) <sup>†</sup>
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
<b>Total</b>		<b>14-15(12,2-3)</b>	

**Semester 8**

Course Code	Course Title	Credit Hours <sup>1</sup>	Prerequisite(s) <sup>†</sup>
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)	
<b>Total</b>		<b>14-16(9,5-7)</b>	

**Grand Total: 136-139 Credit Hours***Indu*