

Course scheme

B.Tech. - Electronics and Communication Engineering



Session 2017 - 2018

**Department of Electronics and Communication Engineering,
Glocal School of Science & Technology,
The Glocal University Saharanpur-247122 (INDIA)
<http://www.glocaluniversity.edu.in>**

Vision:

- To provide world class education in the ECE discipline which encourages practical learning and application to real world problems.

Mission:

- To produce graduates who are knowledgeable, responsible, employable, and ethical and respect the engineering profession and their role and responsibilities as an engineer.

Outcomes of Electronics and Communication Engineering Degree:

- Graduates should be able to analyse and understand ECE problems and be competent in practical knowledge of ECE discipline.
- Graduates should be competent in providing practical knowledge of ECE education to real world problems.
- They should be competent and confident to work in multi-disciplinary organisations and industry.
- ECE Graduates should learn project management skills and time management skills during the course of their education.
- They should be aware of code of ethics of engineering profession and their discipline.
- They should have people skills good communication skills and work well in teams, and understand their social and community responsibilities.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Programme: B.Tech in Electronics and Communication Engineering

Programme Code: EC

The overall credits structure

BD Core (BC)		BD Elective (BE)	
Category	Credits	Category	Credits
DC	84	DE	16
BS	20	OE	16
BES	17		
HU	12		
Total	133	Total	32

Total Credits = 165

Basic Science (BS) Core			
MA-101	Engg Mathematics-I	3-1-0	4
PH-101	Applied Physics	3-0-2	4
MA-102	Engg Mathematics-II	3-1-0	4
CH-101	Applied Chemistry	3-0-2	4
MA-201	Engg Mathematics-III	3-1-0	4
	Total BS Core	15-3-4	20

Basic Engineering & Sciences (BES) Core			
CS-101	Computer Concepts & C	2-1-2	4
CE-101	Environment and Ecology	2-1-0	3
ME-102	Engg. Graphics	1-0-2	2
EC-101	Basic Electrical and Electronics Engg.	2-1-0	3
ME-103	Engineering Mechanics	3-1-0	4
ME-104	Engineering Workshop	0-0-2	1
	Total BES Core	10-4-6	17

Humanities and Social Sciences (HU)			
HU-101	Professional Communication-I	2-0-2	3
HU-102	Professional Communication-II	2-0-2	3
HU-201	Human Values and Professional Ethics	3-0-0	3
HU-202	Cyber Security	3-0-0	3
	Total BS Core	10-0-4	12

Discipline Electives (DE)			
EC-31x	Digital Image Processing	3-0-2	4
EC-31x	Linear Integrated Circuit analysis	3-0-2	4
EC-31x	Material and Components	3-0-0	4
EC-32x	Cellular Mobile Communication	3-2-0	4
EC-32x	8051 Programming and Interfacing	3-0-2	4

Discipline Core (DC)			
EC-111	Mini Project I	0-0-2	1
EC-121	Mini Project II	0-0-2	1
EC-211	Network Analysis and Synthesis	2-1-2	4
EC-212	Analog Electronics	2-1-2	4
EC-213	Digital Electronics	2-1-2	4
EC-214	Electronics and Instrumentation	3-0-2	4
EC-215	Mini Project III	0-0-4	2
EC-221	Electromagnetic Theory	2-2-0	4
EC-222	Signal and Systems	3-1-0	4
EC-223	Control Systems	3-1-0	4
EC-224	Micro Processor and Microcontroller	2-1-2	4
EC-225	Mini Project IV	0-0-4	2
EC-311	Analog Communication	2-1-2	4
EC-312	Communication networks and Transmission Line	3-1-0	4
EC-313	Power Electronics	3-1-0	4
EC-314	Mini Project V	0-0-4	2
EC-321	Digital Communication	2-1-2	4
EC-322	Microwave Engineering	2-1-2	4
EC-323	VLSI circuits and Systems	2-1-2	4
EC-324	Minor Project	0-0-4	2
EC-411	Antenna and Wave Propagation	2-1-2	4
EC-412	Industrial Training	0-0-2	1
EC-413	Major Project –I	0-0-6	3
EC-421	Optical Fiber Communication	3-0-2	4
EC-422	Major Project-II	0-0-12	6
	Total BS Core	38-15-62	84

EC-32x	Device Physics and Fabrication	3-1-0	4
EC-41x	Principles of RFID devices	3-1-0	4
EC-41x	Microwave Circuits	2-1-2	4
EC-41x	Wireless Communication	3-1-0	4
EC-42x	Neural Networks	3-1-0	4
EC-42x	Advance Nanomaterials for Renewable Energy	3-0-2	4
EC-42x	VHDL programming	3-0-2	4

Open Electives(OE)			
XX-22x	Open Elective 1	3-1-0	4
XX-31x	Open Elective 2	3-1-0	4
XX-32x	Open Elective 3	3-1-0	4
XX-41x	Open Elective 4	3-1-0	4

SCHEME OF EXAMINATION OF B.TECH

(Electronics and Communication Engineering)

SCHEME OF EXAMINATION

First Year – 1st Semester

Subject Code	Subject Name	Scheme of Teaching				
		L	T	P	Hours	Credit
MA-101	Engineering Mathematics-I	3	1	0	4	4
CS-101	Computer Concepts & C-programming	2	1	2	5	4
PH-101	Applied Physics	3	0	2	5	4
HU-101	Professional Communication-I	2	1	2	5	4
CE-101	Environment and Ecology	2	1	0	3	3
ME-102	Engineering Graphics	1	1	2	4	3
CE-121	Mini Project-I	0	0	2	2	1
	Total	13	5	10	28	23

First Year – 2nd Semester

Subject Code	Subject Name	Scheme of Teaching				
		L	T	P	Hours	Credit
MA-102	Engineering Mathematics-II	3	1	0	4	4
CH-101	Applied Chemistry	3	0	2	5	4
EC-101	Basic Electrical & Electronics Engineering	2	1	2	5	4
ME-103	Engineering Mechanics	3	1	0	4	4
HU-102	Professional communication-II	2	0	2	4	3
ME-104	Engineering Workshop	0	0	2	2	1
CE-122	Mini Project-II	0	0	2	2	1
	Total	13	4	10	26	21

Second Year – 3rd Semester

Subject Code	Subject Name	Scheme of Teaching				
		L	T	P	Hours	Credit
MAxxx	Engineering Mathematics-III	3	1	0	4	4
EC211	Network Analysis and Synthesis	2	1	2	5	4
EC212	Analog Electronics	2	1	2	5	4
EC213	Digital Electronics	2	1	2	5	4
EC214	Electronics and Instrumentation	3	0	2	5	4
EC215	Project III	0	0	4	4	2
HU201	Human Values and Professional Ethics	3	0	0	3	3
	Total	15	4	12	31	25

Second Year – 4th Semester

Subject Code	Subject Name	Scheme of Teaching				
		L	T	P	Hours	Credit
EC221	Electromagnetic Theory	2	2	0	4	4
EC222	Signals and Systems	3	1	0	4	4
EC223	Control Systems	3	1	0	4	4
EC224	Microprocessor and Microcontroller	2	1	2	5	4
EC225	Project IV	0	0	4	4	2
XX22x	Open Elective 1	3	1	0	4	4
	Total	13	6	6	25	22

Third Year – 5th Semester

Subject Code	Subject Name	Scheme of Teaching				
		L	T	P	Hours	Credit
EC311	Analog Communication	2	1	2	5	4
EC312	Communication networks and Transmission Line	2	1	0	3	3
EC313	Power Electronics	3	1	0	4	4
EC314	Project V	0	0	4	4	2
XX31x	Open Elective 2	3	1	0	4	4
EC31x	Department Elective-1	3	1	0	4	4
	Total	13	5	6	24	21

Third Year – 6th Semester

Subject Code	Subject Name	Scheme of Teaching				
		L	T	P	Hours	Credit
EC321	Digital Communication	2	1	2	5	4
EC322	Microwave Engineering	2	1	2	5	4
EC323	VLSI circuits and Systems	2	1	2	5	4
EC324	Minor Project	-	-	4	4	2
EC32x	Department Elective-2	3	1	0	4	4
XX32x	Open Elective-3	3	1	0	4	4
	Total	12	5	10	27	22

Summer	EC-404 Practical Training	NC only S/Z
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Fourth Year – 7th Semester

Subject Code	Subject Name	Scheme of Teaching				
		L	T	P	Hours	Credit
EC411	Antenna and Wave Propagation	2	1	2	5	4
EC412	Industrial Training	-	-	2	2	1
EC413	Major Project –I	-	-	6	6	3
XX41x	Open Elective-4	3	1	0	4	4
EC41x	Department Elective-3	3	1	0	4	4
	Total	8	3	10	21	16

Fourth Year – 8th Semester

Subject Code	Subject Name	Scheme of Teaching				
		L	T	P	Hours	Credit
EC421	Optical Fiber Communication	3	0	2	5	4
EC422	Major Project-II	-	-	12	12	6
EC42x	Department Elective-4	3	1	0	4	4
	Total	6	1	14	21	14