

# Dual Degree Programme in Electronics and Communication Engineering

## Semester I

	Course Name			
1.	Humanities and Social Sciences-I	2-0-0	2	HS
2.	Environmental Studies	2-0-2	3	BS
3.	Engineering Mathematics-I (Calculus and Transform Based)	4-0-0	4	BS
4.	Engineering Foundation-I (Computer Programming)	2-0-4	4	EF
6.	Introduction to Engineering-I (Lecture/Visit/Demo/Doing)	1-0-2	2	EF
7.	Engineering Drawing & Visualization	0-0-4	2	DI
8.	Principals of Economics	2-0-0	2	HS
9.	English in Practice	2-0-2	Non-credit	
		<b>Total (19)</b>	HS-2, BS-7, EF-6, DI-3	

\*Non-credit course: need to pass Basic English course

## Semester II

	Course Name			
1.	Physics-I	3-0-2	4	BS
2.	Chemistry-I	3-0-2	4	BS
3.	Engineering Mathematics-II (Probability and Statistics)	4-0-0	4	BS
4.	Engineering Foundation-II (Data Structure)	3-0-2	4	EF
5.	Introduction to Engineering-II (Engineering Specific)	1-0-2	Non-Credit	EF
6.	Product Realization	0-0-4	2	DI
7.	Humanities and Social Sciences-II	2-0-0	2	HS
		<b>Total (20)</b>	BS-12, EF-4, DI-2, HS-2	

## Semester III

	Course Name			
1.	Engineering Foundation-III		4	EF
2.	Biology/Chemistry-II/Physics-II	3-0-2	4	BS
3.	Semiconductor Devices and Circuits	4-0-0	4	BC
4.	Digital Electronics and Logic Design	3-0-2	4	BC
5.	Network Analysis and Synthesis	3-0-2	4	BC
6.	Optional Course-I			
		<b>Total (20)</b>	EF-4, BS-4, BC-12	

### Semester IV

	Course Name			
1.	Engineering Foundation-IV (Numerical Analysis)		4	EF
2.	Engineering Foundation-V		4	EF
3.	Signals and Systems	4-0-0	4	BC
4.	Analog Electronics	4-0-0	4	BC
5.	Principles of communication	3-0-2	4	BC
6.	Professional Practice & Ethics	1-0-2	2	HS
7.	Optional Course-II			
		<b>Total 22</b>	EF-8, BC-12, HS-2	

### Semester V

*VI Semester*

	Course Name			
1.	Digital Communication	4-0-0	4	BC
2.	Computer Architecture	4-0-0	4	BC
3.	Bachelor Elective- I		4	BE
4.	Technical Writing	2-0-0	2	HS
5.	Open-Elective-I	3-0-0	3	OE
6.	Open-Elective-II	3-0-0	3	OE
7.	Optional Course-III			
		<b>Total (20)</b>	HS-2, BC-8, BE-4, OE-6	

### Semester VI

	Course Name			
1.	Electromagnetic Theory	4-0-0	4	BC
2.	Introduction to VLSI Design	4-0-0	4	BC
3.	Bachelor Elective- II		4	BE
4.	Open-Elective-III		3	OE
5.	Open-Elective-IV		3	OE
6.	Optional Course-IV			
		<b>Total (18)</b>	BC-8, BE-4, OE-6	

### Semester VII

	Course Name			
1.	Project (Engineering Specific)		6	BE
2.	Bachelor Elective -III		4	BE
3.	MOS VLSI design		3	MC
4.	VLSI Design Laboratory		3	MC
5.	Master Specialization-I		3	ME
		<b>Total (19)</b>	BE- 10, MC-6, ME-3	

**Semester VIII**

	Course Name			
1.	Master Specialization –II		3	ME
2.	Master Specialization –III		3	ME
3.	Master Specialization –IV		3	ME
4.	Master Specialization –V		3	ME
5.	Master Specialization –VI		3	ME
		<b>Total (15)</b>	ME-15	

**Semester IX**

	Course Name			
1.	Master Specialization-VII		3	ME
2.	Master Specialization-VIII		3	ME
3.	Dissertation		9	DS
		<b>Total (15)</b>	ME-6, DS-9	

**Semester X**

	Course Name			
1.	Dissertation		15	DS
		<b>Total (15)</b>	DS-15	

### Core Courses for B. Tech Electronics & Communication Engineering:

S. No.	Course Name
1.	Semiconductor Devices and Circuits
2.	Digital Electronics and Logic Design
3.	Network Analysis and Synthesis
4.	Signals and Systems
5.	Analog Electronics
6.	Principles of communication
7.	Digital Communication
8.	Computer Architecture
9.	Electromagnetic Theory
10.	Introduction to VLSI Design

### Elective Courses for B. Tech Electronics & Communication Engineering:

S. No.	Course Name
1.	Minor Project
2.	Self Study
3.	Control Systems
4.	Fiber optics communication
5.	Digital signal processing
6.	Microprocessors
7.	Information Theory & Coding Tech.
8.	Microwave devices and circuits
9.	Biomedical Electronics
10.	Antenna and propagation

### Elective Courses for M. Tech in VLSI:

S.No.	Course Name
1	Hardware Description Languages
2.	Embedded System Design
3.	ANALOG IC DESIGN
4.	Embedded System Design-II
5.	Low Power VLSI Design
6.	Adaptive Digital Signal Processing
7.	MMICs
8.	RF MEMS
9.	IC Fabrication Technology
10.	Nanolithography & Nanoscale Devices
11.	Introduction to MEMS