

Four Year Degree Course in Bachelor of Engineering Branch: **ELECTRONICS & TELECOMMUNICATION ENGINEERING**
Semester Pattern (Choice Based Credit Grade System)

SEMESTER : THIRD

Sr. No.	Subject Code	Subject	TEACHING SCHEME					EXAMINATION SCHEME									
			HOURS / WEEK			Total HOURS/WEEK	CREDITS	THEORY					PRACTICAL				
			Lecture	Tutorial	P/D			Duration Of Paper (Hr.)	Max. Marks Theory Paper	Internal Marks	Total	Min. Passing Marks	Max. Marks		Total	Min. Passing Marks	
		Int.		Ext.													
THEORY																	
01	3ETC01	Engineering Mathematics-III	4	--	--	4	4	3	80	20	100	40	--	--	--	--	
02	3ETC02	Electronic Devices & Circuits	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
03	3ETC03	Digital System Design	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
04	3ETC04	Electromagnetic Waves	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
05	3ETC05	Object Oriented Programming (ES)	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
06	4ES06	**Environmental Science (Mandatory Course)	2	--	--	2	0	--	--	--	--	--	-	-	-	-	
PRACTICALS / DRAWING / DESIGN																	
07	3ETC06	Electronic Devices and Circuits Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
08	3ETC07	Digital System Design	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
09	3ETC08	Object Oriented Programming Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
10	3ETC09	Electronic Workshop	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
Total			18	0	8	26	20	--	--	--	500	--	--	--	200	--	
Total															700		

Note: **The Examination of Mandatory Subject Environmental Science shall be conducted in IV Semester.

SEMESTER : FOURTH

Sr. No.	Subject Code	Subject	TEACHING SCHEME					EXAMINATION SCHEME									
			HOURS / WEEK			Total HOURS/WEEK	CREDITS	THEORY					PRACTICAL				
			Lecture	Tutorial	P/D			Duration Of Paper (Hr.)	Max. Marks Theory Paper	Internal Marks	Total	Min. Passing Marks	Max. Marks		Total	Min. Passing Marks	
		Int.		Ext.													
THEORY																	
01	4ETC01	Analog and Digital Communication	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
02	4ETC02	Analog Circuits	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
03	4ETC03	Network Theory	4	--	--	4	4	3	80	20	100	40	--	--	--	--	
04	4ETC04	Signals and Systems	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
05	4ETC05	Values and Ethics (HS)	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
06	4ES06	**Environmental Science (Mandatory Course)	2	--	--	2	2	3	80	20	100	40	-	-	-	-	
PRACTICALS / DRAWING / DESIGN																	
07	4ETC06	Analog and Digital Communication Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
08	4ETC07	Analog Circuits Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
09	4ETC08	Network Theory Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
10	4ETC09	Signals & Systems Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
Total			18	0	8	26	22	--	--	--	500	--	--	--	200	--	
															Total		700

Note: **The Examination of Mandatory Subject Environmental Science shall be conducted in IV Semester.

SEMESTER : FIFTH

Sr. No.	Subject Code	Subject	TEACHING SCHEME					EXAMINATION SCHEME									
			HOURS / WEEK			Total HOURS/WEEK	CREDITS	THEORY					PRACTICAL				
			Lecture	Tutorial	P/D			Duration Of Paper (Hr.)	Max. Marks Theory Paper	Internal Marks	Total	Min. Passing Marks	Max. Marks		Total	Min. Passing Marks	
		Int.	Ext.														
THEORY																	
01	5ETC01	Microcontroller	4	--	--	4	4	3	80	20	100	40	--	--	--	--	
02	5ETC02	Control System	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
03	5ETC03	Digital Signal Processing	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
04	5ETC04	Professional Elective –I (PE-I)	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
05	5ETC05	Open Elective – I (OE-I)	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
PRACTICALS / DRAWING / DESIGN																	
06	5ETC06	Microcontroller Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
07	5ETC07	Digital Signal Processing Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
08	5ETC08	Power Electronics Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
09	5ETC09	Electronic lab based on Instrumentation	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
Total			16	0	8	24	20	--	--	--	500	--	--	--	200	--	
													Total		700		
5ETC04: PE (I) : (i) Power Electronics (ii) Fiber Optic Communication (iii) Speech and Audio Processing																	
5ETC05: OE (I) : (i) Sensors and Transducers (ii) Data Structure (iii) Introduction to Java																	

A student will be eligible to get Under Graduate degree with Honors or additional Minor Engineering, if he/she completes an additional 20 credits relevant to the UG program.

The detail of which is as follows:

Course Name	Semester	Credit
MOOCs Course-I	V	04
MOOCs Course-II	VI	04
MOOCs Course-III	VII	04
MOOCs Course-IV	VIII	04
Internship	V to VIII Sem	02
Industrial Visit	V to VIII Sem	02
	Total	20

Note: The student needs to submit

1. MOOCs Course passing certificate of each semester
2. Completion & Evaluation Certificate of Internship
3. Industrial Visit certificate.

Note: Only One MOOCs course per semester shall be considered.

SEMESTER : SIXTH

Sr. No.	Subject Code	Subject	TEACHING SCHEME					EXAMINATION SCHEME									
			HOURS / WEEK			Total HOURS/WEEK	CREDITS	THEORY						PRACTICAL			
			Lecture	Tutorial	P/D			Duration Of Paper (Hr.)	Max. Marks Theory Paper	Internal Marks	Total	Min. Passing Marks	Max. Marks		Total	Min. Passing Marks	
													Int.	Ext.			
THEORY																	
01	6ETC01	Communication Network	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
02	6ETC02	Computer Architecture	4	--	--	4	4	3	80	20	100	40	--	--	--	--	
03	6ETC03	Professional Elective -II (PE-II)	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
04	6ETC04	Open Elective - II (OE-II)	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
05	6ETC05	Economics for Engineers (HS)	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
PRACTICALS / DRAWING / DESIGN																	
06	6ETC06	Communication Network Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
07	6ETC07	Electronic Circuit Design Lab (Hardware + Software)	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
08	6ETC08	Python Programming Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
09	6ETC09	Mini Project	--	--	2	2	1	--	--	--	--	--	50	--	50	25	
Total			16	0	8	24	20	--	--	--	500	--	--	--	200	--	
															Total	700	
6ETC03: PE (II) : (i) CMOS Design (ii) Satellite Communication (iii) Adaptive Signal Processing																	
6ETC04: OE (II) : (i) Electronics Communication System (ii) Wireless Communication (iii) Renewable Energy Sources (Solar & Electric Vehicles)																	

SEMESTER : SEVENTH

Sr. No.	Subject Code	Subject	TEACHING SCHEME					EXAMINATION SCHEME									
			HOURS / WEEK			Total HOURS/WEEK	CREDITS	THEORY					PRACTICAL				
			Lecture	Tutorial	P/D			Duration Of Paper (Hr.)	Max. Marks Theory Paper	Internal Marks	Total	Min. Passing Marks	Max. Marks		Total	Min. Passing Marks	
													Int.	Ext.			
THEORY																	
01	7ETC01	Cryptography & Network Security	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
02	7ETC02	Digital Image and Video Processing	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
03	7ETC03	Project Management and Entrepreneurship	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
04	7ETC04	Professional Elective - III (PE-III)	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
05	7ETC05	Professional Elective- IV (PE-IV)	3	--	--	3	3	3	80	20	100	40	--	--	--	--	
PRACTICALS / DRAWING / DESIGN																	
06	7ETC06	Cryptography & Network Security Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
07	7ETC07	Digital Image and Video Processing Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
08	7ETC08	Project Management and Entrepreneurship Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
09	7ETC09	** Project Stage I (Seminar)	--	--	8	8	4	--	--	--	--	--	100	--	100	50	
Total			15	0	14	29	22	--	--	--	500	--	--	--	250	--	
															Total	750	

7ETC04: PE(III) : (i) High Speed Electronics (ii) Mobile Communication and Networks (iii) Mixed Signal Design

7ETC05: PE(IV) : (i) Introduction to MEMS (ii)Error Correcting Codes(iii) Antenna and Propagation

Note: ** Seminar based on Final year Major Project

SEMESTER : EIGHT

Sr. No.	Subject Code	Subject	TEACHING SCHEME					EXAMINATION SCHEME									
			HOURS / WEEK			Total HOURS/WEEK	CREDITS	THEORY					PRACTICAL				
			Lecture	Tutorial	P/D			Duration Of Paper (Hr.)	Max. Marks Theory Paper	Internal Marks	Total	Min. Passing Marks	Max. Marks		Total	Min. Passing Marks	
													Int.	Ext.			
THEORY																	
01	8ETC01	Embedded Systems	3	--		3	3	3	80	20	100	40	--	--	--	--	
02	8ETC02	Microwave Theory and Techniques	3	--		3	3	3	80	20	100	40	--	--	--	--	
03	8ETC03	Prof. Elective-V (PE-V)	3	--		3	3	3	80	20	100	40	--	--	--	--	
04	8ETC04	Prof. Elective-VI (PE-VI)	3	--		3	3	3	80	20	100	40	--	--	--	--	
PRACTICALS / DRAWING / DESIGN																	
05	8ETC05	Embedded Systems- Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
06	8ETC06	Microwave Theory and Techniques Lab	--	--	2	2	1	--	--	--	--	--	25	25	50	25	
07	8ETC07	Project stage -II	--	--	12	12	6	--	--	--	--	--	100	100	200	100	
Total			12	--	16	28	20	--	--	--	400	--	--	--	300	--	
															Total		700
8ETC03 : PE-V: (i) Nano Electronics (ii) Wireless Sensor Networks (iii) Wavelets (iv) Bio-medical Electronics																	
8ETC04 : PE-VI: (i) 5G-6G Mobile Communication (ii) Information Theory & Coding (iii) Scientific Computing																	