

Approved Course Structure

Program: B.Tech.- Electronics and Communication Engineering

Regulations: SVEC-16

S. No.	Course Code	Course Title	Contact Periods/ Week				Credits (C)	Scheme of Examination Max. Marks		
			L	T	P	Total		Internal Marks	External Marks	Total Marks

I Year - I Semester

1.	16BT1BS02	Engineering Physics	3	1	-	4	3	30	70	100
2.	16BT1BS03	Matrices and Numerical Methods	3	1	-	4	3	30	70	100
3.	16BT1BS04	Multi-variable calculus and Differential equations	3	1	-	4	3	30	70	100
4.	16BT10241	Network Analysis	4	1	-	5	4	30	70	100
5.	16BT10501	Programming in C	3	1	-	4	3	30	70	100
6.	16BT1BS32	Engineering Physics Lab	-	-	3	3	2	50	50	100
7.	16BT10232	Electrical and Electronics Workshop Practice	-	-	3	3	2	50	50	100
8.	16BT10251	Network Analysis Lab	-	-	3	3	2	50	50	100
9.	16BT10531	Programming in C Lab	-	-	3	3	2	50	50	100
Total			16	5	12	33	24	350	550	900

S. No.	Course Code	Course Title	Contact Periods/ Week				Credits (C)	Scheme of Examination Max. Marks		
			L	T	P	Total		Internal Marks	External Marks	Total Marks
I Year - II Semester										
1.	16BT1HS01	Technical English	3	1	-	4	3	30	70	100
2.	16BT1BS01	Engineering Chemistry	3	1	-	4	3	30	70	100
3.	16BT2BS01	Transformation Techniques and Partial Differential Equations	3	1	-	4	3	30	70	100
4.	16BT20401	Electronic Devices and Circuits	3	1	-	4	3	30	70	100
5.	16BT20541	Foundations of Data Structures	3	1	-	4	3	30	70	100
6.	16BT1HS31	English Language Lab	-	-	3	3	2	50	50	100
7.	16BT1BS31	Engineering Chemistry Lab	-	-	3	3	2	50	50	100
8.	16BT10331	Computer Aided Engineering Drawing	-	1	6	7	3	50	50	100
9.	16BT20551	Foundations of Data structures Lab	-	-	3	3	2	50	50	100
Total			15	6	15	36	24	350	550	900

S. No.	Course Code	Course Title	Contact Periods/ Week				Credits (C)	Scheme of Examination Max. Marks		
			L	T	P	Total		Internal Marks	External Marks	Total Marks
II Year - I Semester										
1.	16BT3HS01	Environmental Studies	3	-	-	3	3	30	70	100
2.	16BT3BS02	Special Functions and Complex Analysis	3	1	-	4	3	30	70	100
3.	16BT30401	Electronic Circuit Analysis and Design	3	1	-	4	3	30	70	100
4.	16BT30402	Signals and Systems	3	1	-	4	3	30	70	100
5.	16BT30403	Switching Theory and Logic Design	3	1	-	4	3	30	70	100
6.	16BT30241	Electrical Technology	3	1	-	4	3	30	70	100
7.	16BT30251	Electrical Technology Lab	-	-	3	3	2	50	50	100
8.	16BT30431	Basic Electronics and Digital Design Lab	-	-	3	3	2	50	50	100
9.	16BT30432	Signal and Systems Lab	-	-	3	3	2	50	50	100
Total			18	5	9	32	24	330	570	900

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			L	T	P	Total		Internal Marks	External Marks	Total Marks
II Year - II Semester										
1.	16BT40401	Analog Communications	3	1	-	4	3	30	70	100
2.	16BT40402	Digital IC Applications	3	1	-	4	3	30	70	100
3.	16BT40403	Electromagnetic Theory and Transmission Lines	3	1	-	4	3	30	70	100
4.	16BT40404	Linear IC Applications	3	1	-	4	3	30	70	100
5.	16BT40405	Probability and Stochastic Process	3	1	-	4	3	30	70	100
6.	16BT40406	Pulse and Digital Circuits	3	1	-	4	3	30	70	100
7.	16BT40431	Analog Communications Lab	-	-	3	3	2	50	50	100
8.	16BT40432	Electronic Circuit Analysis and Design Lab	-	-	3	3	2	50	50	100
9.	16BT40433	Pulse and Digital Circuits Lab	-	-	3	3	2	50	50	100
Total			18	6	9	33	24	330	570	900

S. No.	Course Code	Course Title	Contact Periods/Week				Credits (C)	Scheme of Examination Max. Marks		
			L	T	P	Total		Internal Marks	External Marks	Total Marks
III Year - I Semester										
1.	16BT3HS02	Managerial Economics and Principles of Accountancy	3	1	-	4	3	30	70	100
2.	16BT50201	Control Systems	3	1	-	4	3	30	70	100
3.	16BT50401	Digital Communications	3	1	-	4	3	30	70	100
4.	16BT50402	Microprocessors and Microcontrollers	3	1	-	4	3	30	70	100
5.	16BT50403	VLSI Design	3	1	-	4	3	30	70	100
Interdisciplinary Elective-1										
6.	16BT50404	Electronic Measurements and Instrumentation	3	1	-	4	3	30	70	100
	16BT50501	Computer Networks								
	16BT30501	Computer Organization								
	16BT51241	Object Oriented Programming								
7.	16BT50431	Linear and Digital IC Applications Lab	-	-	3	3	2	50	50	100
8.	16BT50432	Microprocessors and Microcontrollers Lab	-	-	3	3	2	50	50	100
9.	16BT4HS31	Soft Skills Lab	-	-	3	3	2	50	50	100
Total			18	6	9	33	24	330	570	900

S. No.	Course Code	Course Title	Contact Periods/ Week				Credits (C)	Scheme of Examination Max. Marks		
			L	T	P	Total		Internal Marks	External Marks	Total Marks
III Year - II Semester										
1.	16BT5HS01	Management Science	3	1	-	4	3	30	70	100
2.	16BT60401	Antennas and Waveguides	3	1	-	4	3	30	70	100
3.	16BT60402	Digital Signal Processing	3	1	-	4	3	30	70	100
Interdisciplinary Elective-2										
4.	16BT40502	Database Management Systems	3	1	-	4	3	30	70	100
	16BT71205	Cryptography and Network Security								
	16BT31501	Operating Systems								
	16BT61241	Wireless Sensor Networks								
Program Elective - 1										
5.	16BT60403	Analog IC Design	3	1	-	4	3	30	70	100
	16BT60404	Image Processing								
	16BT60405	Radar Engineering								
	16BT60406	Telecommunication Switching Systems								
Program Elective - 2										
6.	16BT60407	Digital CMOS IC Design	3	1	-	4	3	30	70	100
	16BT60408	Information Theory and Coding								
	16BT60409	Light Wave Communications								
	16BT60410	Nanoelectronics								
7.	16BT60431	Digital Communications Lab	-	-	3	3	2	50	50	100
8.	16BT60432	Digital Signal Processing Lab	-	-	3	3	2	50	50	100
9.	16BT60433	Seminar	-	-	-	-	2	-	100	100
10.	16BT6MOOC	MOOC	-	-	-	-	-	-	-	-
Total			18	6	6	30	24	280	620	900

S. No.	Course Code	Course Title	Contact Periods/ Week				Credits (C)	Scheme of Examination Max. Marks		
			L	T	P	Total		Internal Marks	External Marks	Total Marks
IV Year - I Semester										
1.	16BT70401	Cellular and Mobile Communications	3	1	-	4	3	30	70	100
2.	16BT70402	Embedded Systems	3	1	-	4	3	30	70	100
3.	16BT70403	Microwave Engineering	3	1	-	4	3	30	70	100
Program Elective - 3										
4.	16BT70404	Advanced Digital Signal Processing	3	1	-	4	3	30	70	100
	16BT70405	Mixed Signal Design								
	16BT70406	Satellite Communications								
	16BT70407	Wireless Communication and Networks								
Program Elective - 4										
5.	16BT70408	Low Power CMOS VLSI Design	3	1	-	4	3	30	70	100
	16BT70409	RF Engineering								
	16BT70410	Speech Processing								
	16BT70411	Spread Spectrum Communication								
Open Elective										
			3	1	-	4	3	30	70	100
6.	16BT70431	Antennas and Microwave Engineering Lab	-	-	3	3	2	50	50	100
7.	16BT70432	Embedded Systems Lab	-	-	3	3	2	50	50	100
8.	16BT70433	Comprehensive Assessment	-	-	-	-	2	-	100	100
Total			18	6	6	30	24	280	620	900

List of Open Electives

Sl. No.	Course Code	Open Elective Course Title
1.	16BT6HS01	Banking and Insurance
2.	16BT6HS02	Business Communication and Career Skills
3.	16BT6HS03	Cost Accounting and Financial Management
4.	16BT6HS04	Entrepreneurship for Micro, Small and Medium Enterprises
5.	16BT6HS05	French Language
6.	16BT6HS06	German Language
7.	16BT6HS07	Indian Constitution
8.	16BT6HS08	Indian Economy
9.	16BT6HS09	Indian Heritage and Culture
10.	16BT6HS10	Indian History
11.	16BT6HS11	Personality Development
12.	16BT6HS12	Philosophy of Education
13.	16BT6HS13	Public Administration
14.	16BT60112	Building Maintenance and Repair
15.	16BT60113	Contract Laws and Regulations
16.	16BT60114	Disaster Mitigation and Management
17.	16BT60115	Environmental Pollution and Control
18.	16BT60116	Planning for Sustainable Development
19.	16BT60117	Professional Ethics
20.	16BT60118	Rural Technology
21.	16BT60308	Global Strategy and Technology
22.	16BT60309	Intellectual Property Rights and Management
23.	16BT60310	Managing Innovation and Entrepreneurship
24.	16BT60311	Materials Science
25.	16BT70412	Green Technologies
26.	16BT70413	Introduction to Nanoscience and Technology
27.	16BT60505	Engineering System Analysis and Design
28.	16BT71011	Micro-Electro-Mechanical Systems
29.	16BT61205	Cyber Security and Laws
30.	16BT61505	Bio-informatics

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IV Year - II Semester										
1.	16BT80431	Project Work *	-	-	-	-	12	100	100	200
Total			-	-	-	-	12	100	100	200

*Full-time project work



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