

Approved Course Structure

Program: B.Tech.- Electrical and Electronics 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	16BT10201	Electric Circuits	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	16BT10231	Electric Circuits Lab	--	--	3	3	2	50	50	100
8	16BT10232	Electrical and Electronics Workshop Practice	--	--	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	16BT30201	DC Machines	3	1	--	4	3	30	70	100
4	16BT30202	Electromagnetic Fields	3	1	--	4	3	30	70	100
5	16BT30203	Signals, Systems and Networks	3	1	--	4	3	30	70	100
6	16BT30441	Analog Electronic Circuits	3	1	--	4	3	30	70	100
7	16BT30231	DC Machines Lab	--	--	3	3	2	50	50	100
8	16BT30232	Signals and Networks Lab	--	--	3	3	2	50	50	100
9	16BT30451	Analog Electronic Circuits Lab	--	--	3	3	2	50	50	100
Total			18	5	9	32	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
II Year - II Semester										
1	16BT40201	Electrical Measurements	3	1	--	4	3	30	70	100
2	16BT40202	Generation of Electric Power	3	1	--	4	3	30	70	100
3	16BT40203	Transformers and Induction Machines	3	1	--	4	3	30	70	100
4	16BT41002	Linear and Digital ICs	3	1	--	4	3	30	70	100
5	16BT30403	Switching Theory and Logic Design	3	1	--	4	3	30	70	100
6	16BT41041	Computer Architecture and Organization	3	1	--	4	3	30	70	100
7	16BT40231	Electrical Measurements Lab	--	--	3	3	2	50	50	100
8	16BT40232	Transformers and Induction Machines Lab	--	--	3	3	2	50	50	100
9	16BT41033	Linear and Digital ICs 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	16BT50202	Power Electronics	3	1	--	4	3	30	70	100
4	16BT50203	Synchronous Machines	3	1	--	4	3	30	70	100
5	16BT50204	Transmission and Distribution	3	1	--	4	3	30	70	100
6	Interdisciplinary Elective-1		3	1	--	4	3	30	70	100
	16BT40502	Database Management Systems								
	16BT51003	Principles of Communications								
	16BT51041	Sensors and Signal Conditioning								
	16BT31501	Operating Systems								
7	16BT50231	Control Systems Lab	--	--	3	3	2	50	50	100
8	16BT50232	Synchronous Machines 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	16BT60201	Power Semiconductor Drives	3	1	--	4	3	30	70	100
3	16BT60202	Power System Analysis	3	1	--	4	3	30	70	100
	Interdisciplinary Elective-2		3	1	--	4	3	30	70	100
4	16BT50501	Computer Networks								
	16BT61001	ARM Processors and PIC Microcontrollers								
	16BT61041	Programmable Logic Controllers								
	16BT51241	Object Oriented Programming								
	Program Elective-1		3	1	--	4	3	30	70	100
5	16BT60203	Design and Estimation of Electrical Systems								
	16BT60204	Digital Signal Processing for Electrical Engineers								
	16BT60205	Electrical Machine Design								
	16BT60206	HVDC Transmission								
	Program Elective-2		3	1	--	4	3	30	70	100
6	16BT60207	Advanced Control Systems								
	16BT60208	High Voltage Engineering								
	16BT60209	Instrumentation								
	16BT60210	Special Electrical Machines								
7	16BT60231	Power Electronics and Drives Lab	--	--	3	3	2	50	50	100
8	16BT60232	Power System - I Lab	--	--	3	3	2	50	50	100
9	16BT60233	Seminar	--	--	--	--	2	--	100	100
10	16BT6MOOC	Massive Open Online Course (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	16BT70201	Power System Operation and Control	3	1	--	4	3	30	70	100
2	16BT70402	Embedded Systems	3	1	--	4	3	30	70	100
3	16BT70202	Switchgear and Protection	3	1	--	4	3	30	70	100
Program Elective-3										
4	16BT70203	Energy Conservation and Management	3	1	--	4	3	30	70	100
	16BT70204	Flexible AC Transmission systems								
	16BT70205	Power System Automation								
	16BT70206	Power System Reliability								
Program Elective-4										
5	16BT70207	Analysis of Power Electronic Converters	3	1	--	4	3	30	70	100
	16BT70208	Power Quality								
	16BT70209	Smart Grid Technology								
	16BT70210	Soft Computing Techniques								
Open Elective			3	1	--	4	3	30	70	100
6	16BT70231	Power System - II Lab	--	--	3	3	2	50	50	100
7	16BT70432	Embedded Systems Lab	--	--	3	3	2	50	50	100
8	16BT70232	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	Sl. No.	Course Code	Open Elective Course Title
1.	16BT6HS01	Banking and Insurance	16.	16BT60114	Disaster Mitigation and Management
2.	16BT6HS02	Business Communication and Career Skills	17.	16BT60115	Environmental Pollution and Control
3.	16BT6HS03	Cost Accounting and Financial Management	18.	16BT60116	Planning for Sustainable Development
4.	16BT6HS04	Entrepreneurship for Micro, Small and Medium Enterprises	19.	16BT60117	Professional Ethics
5.	16BT6HS05	French Language	20.	16BT60118	Rural Technology
6.	16BT6HS06	German Language	21.	16BT60308	Global Strategy and Technology
7.	16BT6HS07	Indian Constitution	22.	16BT60309	Intellectual Property Rights and Management
8.	16BT6HS08	Indian Economy	23.	16BT60310	Managing Innovation and Entrepreneurship
9.	16BT6HS09	Indian Heritage and Culture	24.	16BT60311	Materials Science
10.	16BT6HS10	Indian History	25.	16BT70412	Green Technologies
11.	16BT6HS11	Personality Development	26.	16BT70413	Introduction to Nanoscience and Technology
12.	16BT6HS12	Philosophy of Education	27.	16BT60505	Engineering System Analysis and Design
13.	16BT6HS13	Public Administration	28.	16BT71011	Micro-Electro-Mechanical Systems
14.	16BT60112	Building Maintenance and Repair	29.	16BT61205	Cyber Security and Laws
15.	16BT60113	Contract Laws and Regulations	30.	16BT61505	Bio-informatics

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IV Year - II Semester										
1	16BT80231	Project Work *	--	--	--	--	12	100	100	200
Total			--	--	--	--	12	100	100	200

*Full-time project work


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