

CURRICULAR STRUCTURE AND EVALUATION SCHEME

B. TECH. ELCTRICAL ENGINEERING

with

MINOR SPECILIZATION IN COMPUTER ENGINEERING

SEMESTER: III

COURSE MODULE				TEACHING PERIODS			WEIGHTAGE: EVALUATION			
COURSE			Credits	L	T	P	C WA	MSE	ESE	Total
Code	Title	Component								
TMA 301	Discrete Mathematics	BSC	4	3	1	-	25	25	50	100
TECS 301	Electrical Circuit Analysis	CC	4	3	1	-	25	25	50	100
TECS 302	Electrical Machines – I	CC	3	3	-	-	25	25	50	100
TECS 303	Electrical Engineering Material	CC	3	3	-	-	25	25	50	100
TECS 304	Data Structures and Algorithms	CC	3	3	-	-	25	25	50	100
TECS 305	Design of Digital Systems	CC	3	3	-	-	25	25	50	100
PECS 351	Electrical Machines-I Lab	CC	1	-	-	2	25	25	50	100
PECS 352	Data Structures Lab	CC	1	-	-	2	25	25	50	100
PECS 353	Digital Systems Lab	CC	1	-	-	2	25	25	50	100
XCS 301	Career Skill -I	HSMC	1	2	-	-	25	25	50	100
GP 301	General Proficiency	GP	1	-	-	-	-	-	-	100
Total			25	20	2	6				1100

SEMESTER: IV

COURSE MODULE				TEACHING PERIODS			WEIGHTAGE: EVALUATION			
COURSE			Credits	L	T	P	C WA	MSE	ESE	Total
Code	Title	Component								
TECS 401	Electrical Machines – II	CC	3	3	-	-	25	25	50	100
TECS 402	Microprocessor and Interfacing	CC	3	3	-	-	25	25	50	100
TECS 403	Signals and Systems	CC	3	2	1	-	25	25	50	100
TECS 404	Programming using C++	CC	3	3	-	-	25	25	50	100
TECS 405	Software Engineering	CC	3	3	-	-	25	25	50	100
PECS 451	Electrical Machines-II Lab	CC	1	-	-	2	25	25	50	100
PECS 452	Microprocessor Lab	CC	1	-	-	2	25	25	50	100
PECS 453	C++ Lab	CC	1	-	-	2	25	25	50	100
XCS 401	Career Skill -II	HSMC	1	2	-	-	25	25	50	100
GP 401	General Proficiency	GP	1	-	-	-	-	-	-	100
Total			20	16	1	6				1000

SEMESTER: V

COURSE MODULE				TEACHING PERIODS			WEIGHTAGE: EVALUATION			
COURSE			Credits	L	T	P	C WA	MSE	ESE	Total
Code	Title	Component								
TECS 501	Power Systems-I	CC	3	2	1	-	25	25	50	100
TECS 502	Control Systems	CC	3	2	1	-	25	25	50	100
TECS 503	Design and Analysis of Algorithms	CC	3	3	-	-	25	25	50	100
	Program Elective – 1	PEC	3	3	-	-	25	25	50	100
	Open Elective-1	OEC	3	3	-	-	25	25	50	100
PECS 551	Power Systems Lab- I	CC	1	-	-	2	25	25	50	100
PECS 552	Control Systems Lab	CC	1	-	-	2	25	25	50	100
PECS 553	Algorithms Lab	CC	1	-	-	2	25	25	50	100
XCS 501	Career Skill -III	HSMC	1	2	-	-	25	25	50	100
GP 501	General Proficiency	GP	1	-	-	-	-	-	-	100
	Total		20	15	2	6				1000

SEMESTER: VI

COURSE MODULE				TEACHING PERIODS			WEIGHTAGE: EVALUATION			
COURSE			Credits	L	T	P	C WA	MSE	ESE	Total
Code	Title	Component								
TECS 601	Power Electronics	CC	3	2	1	-	25	25	50	100
TECS 602	Power Systems – II	CC	3	2	1	-	25	25	50	100
TECS 603	Power System Protection	CC	3	3	-	-	25	25	50	100
	Program Elective – 2	PEC	3	3	-	-	25	25	50	100
	Open Elective-2	OEC	3	3	-	-	25	25	50	100
UCE - 601	Disaster Management	HSMC	3	3	-	-	25	25	50	100
PECS 651	Power Electronics lab	CC	1	-	-	2	25	25	50	100
PECS 652	Power Systems-II Lab	CC	1	-	-	2	25	25	50	100
XCS 601	Career Skill -IV	HSMC	1	2	-	-	25	25	50	100
GP 601	General Proficiency	GP	1	-	-	-	-	-	-	100
	Total		22	18	2	4				1000

SEMESTER: VII

COURSE MODULE				TEACHING PERIODS			WEIGHTAGE:EVALUATION			
COURSE			Credits	L	T	P	C WA	MSE	ESE	Total
Code	Title	Component								
TECS 701	Electrical Drives	CC	3	2	1	-	25	25	50	100
	Program Elective -3	PEC	3	3	-	-	25	25	50	100
	Program Elective -4	PEC	3	3	-	-	25	25	50	100
	Open Elective-3	OEC	3	3	-	-	25	25	50	100
PECS 751	Electrical Drives Lab	CC	1	-	-	2	25	25	50	100
PECS 752	Project Phase – I	PJ	3	-	-	6	100	-	-	100
SE 701	Industrial Seminar	SM	1	-	-	2	100	-	-	100
GP 701	General Proficiency	GP	1	-	-	-	-	-	-	100
	Total		18	11	1	10				800

SEMESTER: VIII

COURSE DETAILS				TEACHING PERIODS			WEIGHTAGE:EVALUATION			
COURSE			Credits	L	T	P	C WA	MSE	ESE	Total
Course	Title	Component								
	Program Elective -5	PEC	3	3	-	-	25	25	50	100
	Program Elective -6	PEC	3	3	-	-	25	25	50	100
	Open Elective-4	OEC	3	3	-	-	25	25	50	100
PECS 851	Project Phase-II	PJ	8	-	-	16	50	-	50	100
GP 801	General Proficiency	GP	1	-	-	-	-	-	-	100
	Total		18	9	0	16				500

PROFESSIONAL ELECTIVE COURSES

Course Type	Semester	Course Code	Course Name
Program Elective - I	5 TH	TECS 504	Web Designing and Management
		TECS 505	Operating Systems
		TECS 506	Programming using Python
		TECS 507	Java Programming
		TECS 508	Machine Learning
Program Elective - II	6 TH	TECS 604	Number Theory and Cryptography
		TECS 605	Data Mining and Data Warehousing
		TECS 606	Graph Theory
		TECS 607	Computer Architecture
		TECS 608	Network Programming and Wireless Technologies
Program Elective – III	7 TH	TECS 609	High Voltage Engineering
		TECS 610	Electrical Design Estimating and Costing
		TECS 611	Modern Control System
		TECS 612	Industrial Electrical Systems
		TECS 613	Computational Electromagnetics
Program Elective – IV	7 TH	TECS 702	Human Computer Interaction
		TECS 703	Mobile Computing and Communication
		TECS 704	Big Data Analytics
		TECS 705	Cloud Computing
		TECS 706	Advanced Computer Architecture
Program Elective - V	8 TH	TECS 707	Utilization of Electrical Energy
		TECS 708	Power Plant Instrumentation
		TECS 709	Electrical Energy Management and Auditing
		TECS 710	Electrical and Hybrid Vehicles
		TECS 711	Digital Control Systems
Program Elective - VI	8 TH	TECS 801	Data Communication
		TECS 802	System Programming
		TECS 803	Compiler Design
		TECS 804	Fundamentals of IoT
		TECS 805	Mobile Application Development

OPEN ELECTIVE COURSES [ELECTRICAL ENGINEERING]

Course Type	Semester	Course Code	Course Name
Open Elective - I	5 TH	TOE 501	Engineering economics
		TOE 502	Electronic Devices
		TOE 503	Human Values and Professional Ethics For Engineers
		TOE 504	IT in Business
Open Elective - II	6 TH	TOE 601	Discrete Data and Digital Control
		TOE 602	Communication Engineering
		TOE 603	Industrial automation
		TOE 604	Computer Networks
Open Elective - III	7 TH	TOE 701	Digital Signal Processing
		TOE 702	VLSI Design
		TOE 703	Biomedical Electronics
		TOE 704	Information Theory and Coding
Open Elective - IV	7 TH	TOE 705	Artificial Intelligence
		TOE 706	Computational Intelligence
		TOE 707	Networks and Systems Security
		TOE 708	Distribution System Engineering
Open Elective - V	8 TH	TOE 801	Smart Grid Technology
		TOE 802	Computer Vision
		TOE 803	Computer Graphics
		TOE 804	Cryptography and Computer Security
Open Elective - VI	8 TH	TOE 805	Non-conventional energy resources & Energy systems
		TOE 806	Expert System and Fuzzy Logic
		TOE 807	Intelligent Sensors and Instrumentation
		TOE 808	Intelligent power systems