PROFESSIONAL ELECTIVE COURSES: VERTICALS

VERTICAL 1: SEMICONDUCTOR AND VLSI DESIGN

S.NO.	COURSE CODE	COURSETITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	24ECE01	Testing of VLSI	PEC	3	0	0	3	3
2	24ECE02	Low Power VLSI Design	PEC	3	0	0	3	3
3	24ECE03	FPGA and ASIC Design	PEC	3	0	0	3	3
4	24ECE04	Semiconductor Device & Modelling	PEC	3	0	0	3	3
5	24ECE05	Analog IC Design	PEC	3	0	0	3	3
6	24ECE06	System ON-CHIP Design	PEC	3	0	0	3	3

VERTICAL 2: ADVANCED COMMUNICATION TECHNOLOGIES

S.NO.	COURSE CODE	COURSETITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	24ECE07	5G Communication Networks	PEC	3	0	0	3	3
2	24ECE08	Information Theory and Coding	PEC	3	0	0	3	3
3	24ECE09	Adhoc and Wireless Sensor Networks	PEC	3	0	0	3	3
4	24ECE10	Software Defined Radio & Networks	PEC	3	0	0	3	3
5	24ECE11	Optical Fiber and Communication Networks	PEC	3	0	0	3	3
6	24ECE12	Advanced Wireless Communication Techniques	PEC	3	0	0	3	3

VERTICAL 3: SIGNAL PROCESSING

S.NO.	COURSE CODE	COURSETITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	24ECE13	Advanced Digital Signal Processing	PEC	3	0	0	3	3
2	24ECE14	Digital Image Processing	PEC	3	0	0	3	3
3	24ECE15	Speech Processing	PEC	3	0	0	3	3
4	24ECE16	Multimedia Signal Compression & Processing	PEC	3	0	0	3	3
5	24ECE17	DSP IC	PEC	3	0	0	3	3
6	24ECE18	DSP Architecture and Programming	PEC	3	0	0	3	3

VERTICAL 4: COMPUTATIONAL INTELLIGENCE

S. NO.	COURSE CODE	COURSETITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	24ECE19	Artificial Intelligence & Machine Learning	PEC	3	0	0	3	3
2	24ECE20	Cyber & Network Security	PEC	3	0	0	3	3
3	24ECE21	Cloud & Quantum Computing	PEC	3	0	0	3	3
4	24ECE22	Big Data Analytics & Data Science	PEC	3	0	0	3	3
5	24ECE23	Robotics & Intelligent Automation	PEC	3	0	0	3	3
6	24ECE24	Deep Learning in Signal Processing & Computer Vision	PEC	3	0	0	3	3

VERTICAL 5: SENSORS & IoT

S.NO.	COURSE CODE	COURSETITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	24ECE25	MEMS Design	PEC	3	0	0	3	3
2	24ECE26	IOT System Design and Application	PEC	3	0	0	3	3
3	24ECE27	Sensors and Actuators	PEC	3	0	0	3	3
4	24ECE28	Wireless Sensor Network Design	PEC	3	0	0	3	3
5	24ECE29	Industrial IoT & Automation	PEC	3	0	0	3	3
6	24ECE30	Fundamentals of Nanoelectronics	PEC	3	0	0	3	3

VERTICAL 6: SPACE TECHNOLOGIES

S.NO.	COURSE CODE	COURSETITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	24ECE31	Remote Sensing Control	PEC	3	0	0	3	3
2	24ECE32	Radar and Navigation Engineering	PEC	3	0	0	3	3
3	24ECE33	Avionics Systems	PEC	3	0	0	3	3
4	24ECE34	Satellite Communication	PEC	3	0	0	3	3
5	24ECE35	Rocket Propulsion	PEC	3	0	0	3	3
6	24ECE36	Space Vehicles	PEC	3	0	0	3	3

VERTICAL 7: BIO – MEDICAL TECHNOLOGIES

S.NO.	COURSE CODE	COURSETITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1	24ECE37	Wearable Devices	PEC	3	0	0	3	3
2	24ECE38	Medical Imaging System	PEC	3	0	0	3	3
3	24ECE39	Bio-Medical Instrumentation	PEC	3	0	0	3	3
4	24ECE40	Therapeutic Equipment	PEC	3	0	0	3	3
5	24ECE41	Brain Computer Interface and Applications	PEC	3	0	0	3	3
6	24ECE42	Body Area Networks	PEC	3	0	0	3	3