ANNEXURE - I

PERI INSTITUTE OF TECHNOLOGY

(AUTONOMOUS)

REGULATIONS 2024

B.E. ELECTRONICS AND COMMUNICATION ENGINEERING

SEMESTER - I

S.NO.	COURSE CODE	COURSETITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	24HSS01	Life Skills - I	EEC	1	0	0	1	1
2.	24GSS01	Personal and Professional Competencies for Engineers	EEC	1	0	0	1	1
3.	24MA101	Engineering Mathematics-I	BSC	3	1	0	4	4
4.	24ECC01	Embedded C Programming	ESC	3	0	0	3	3
5.	24MEC01	Engineering Graphics and Design	ESC	2	0	4	6	4
6.	24EC101	Introduction to Electronics and Communication Engineering	PCC	3	0	0	3	3
LAB INTEGRATED COURSE								
7.	24PH102	Physics for Electronics Engineering	BSC	3	0	2	5	4
PRACTICALS								
8.	24ECC02	Embedded C Programming laboratory	ESC	0	0	4	4	2
9.	24HS101	Communication Lab - I	HSMC	0	0	2	2	1
			TOTAL	**16**	**1**	**12**	**29**	**23**

SEMESTER - II

S.NO.	COURSE CODE	COURSETITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	24HSS02	Life Skills - II	EEC	1	0	0	1	1
2.	24HS203	Tamils and Technology	HSMC	1	0	0	1	1
3.	24EEC01	Basic Electrical and Electronics Engineering	ESC	4	0	0	4	4
4.	24ECC03	Embedded Python Programming	ESC	3	0	0	3	3
LAB INTEGRATED COURSE								
5.	24CY101	Engineering Chemistry	BSC	3	0	2	5	4
6.	24MA202	Engineering Mathematics - II	BSC	3	0	2	5	4
PRACTICALS								
7.	24MEC02	IDEA Lab	ESC	0	0	4	4	2
8.	24ECC04	Embedded Python Programming lab	ESC	0	0	4	4	2
9.	24HS202	Communication Lab - II	HSMC	0	0	2	2	1
MANDATORY COURSE								
10.	24GSM01	Environmental Science and Engineering	MC	2	0	0	2	0
			TOTAL	**17**	**0**	**14**	**31**	**22**

SEMESTER - III

S.NO.	COURSE CODE	COURSETITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	24MA304	Random Process and Linear Algebra	BSC	3	1	0	4	4
2.	24EC302	Circuit Analysis	PCC	3	0	0	3	3
3.	24EC303	Electronic Devices and Circuits	PCC	3	0	0	3	3
4.		Open Elective-I	OEC	3	0	0	3	3
5.	24HSS03	Life Skill - III - Basic Conversation Skills	EEC	1	0	0	1	1
6.	24GSS03	Holistic Personality Development and Behavioral Skills	EEC	1	0	0	1	1
LAB INTEGRATED COURSE								
7.	24CS306	Data Structures	ESC	3	0	2	5	4
PRACTICALS								
8.	24EC304	Electrical Circuits and Electronic Devices Laboratory	PCC	0	0	3	3	1.5
TOTAL				**17**	**1**	**5**	**23**	**20.5**

SEMESTER - IV

S.NO.	COURSE CODE	COURSETITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	24EC405	Analog and Digital Communication	PCC	3	0	0	3	3
2.	24EC406	Linear Integrated Circuits and Its Application	PCC	3	0	0	3	3
3.	24EC407	Signals and Systems	PCC	3	0	0	3	3
4.		Professional Elective-I	PEC	3	0	0	3	3
5.		Open Elective-II	OEC	3	0	0	3	3
6.	24HSS04	Life Skill - IV - Public Speaking Practices	EEC	1	0	0	1	1
7.	24GSS02	Invention – Principles and Practices	EEC	1	0	0	1	1
LAB INTEGRATED COURSE								
8.	24EC408	Digital Design and Verilog HDL	PCC	3	0	2	5	4
PRACTICALS								
9.	24EC409	Analog and Digital Communication Laboratory	PCC	0	0	3	3	1.5
10.	24EC410	Linear Integrated Circuits Laboratory	PCC	0	0	3	3	1.5

TOTAL	20	0	8	28	24

SEMESTER – V

S.NO.	COURSE CODE	COURSE TITLE	CATE GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	24EC511	Digital Signal Processing	PCC	3	0	0	3	3
2.	24EC512	Microcontroller and Embedded System	PCC	3	0	0	3	3
3.	24EC513	Control System Engineering	PCC	3	0	0	3	3
4.	24EC514	Electromagnetics and Transmission Lines	PCC	3	0	0	3	3
5.		Professional Elective -II	PEC	3	0	0	3	3
6.		Open Elective -III	OEC	3	0	0	3	3
7.	24HSS05	English for Competitive Exams	HSMC	2	0	0	2	2
PRACTICALS								
8.	24EC515	Digital Signal Processing Laboratory	PCC	0	0	4	4	2
9.	24EC516	Microcontroller and Embedded System Laboratory	PCC	0	0	3	3	1.5
MANDATORY COURSE								
10.	24GSM04	Essence of Indian Traditional Knowledge and Science	MC	2	0	0	2	0
			TOTAL	**22**	**0**	**7**	**29**	**23.5**

SEMESTER - VI

S.NO.	COURSE CODE	COURSE TITLE	CAT GORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	24EC617	Antenna and Wave Propagation	PCC	3	0	0	3	3
2.	24EC618	Wireless Communication	PCC	3	0	0	3	3
3.		Professional Elective –III	PEC	3	0	0	3	3
4.		Open Elective –IV	OEC	3	0	0	3	3
5.	24HSS06	Career Awareness and Professional Profile Building	EEC	1	0	0	1	1
LAB INTEGRATED COURSE								
6.	24EC619	CMOS VLSI Design and Physical Implementation	PCC	3	0	2	5	4
PROJECT INTEGRATED COURSE								
7.	24EC620	Advanced Embedded System and IoT	PCC	3	0	2	5	4
PRACTICALS								
8.	24EC621	Applied Engineering Project	EEC	0	0	4	4	2
MANDATORY COURSE								

9.	24GSM05	Behavioural Science and Psychology	MC	2	0	0	2	0
			TOTAL	**21**	**0**	**8**	**29**	**23**

SEMESTER – VII

S.NO.	COURSE CODE	COURSE TITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
1.	24EC722	Communication Networks	PCC	3	0	0	3	3
2.	24EC723	RF and Microwave Engineering	PCC	3	0	0	3	3
3.	24HS704	Universal Human Values	HSMC	3	0	0	3	3
4		Professional Elective -IV	PEC	3	0	0	3	3
5		Management Elective Course	HSMC	3	0	0	3	3
PRACTICALS								
6.	24EC724	Internship	EEC	0	0	0	0	1
7.	24EC725	Capstone Project - I	EEC	0	0	8	8	4
			TOTAL	**15**	**0**	**8**	**23**	**20**

SEMESTER - VIII

S.NO.	COURSE CODE	COURSETITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
THEORY								
PRACTICALS								
1.	24EC826	Internship	EEC	0	0	0	0	1
2.	24EC827	Capstone Project - II	EEC	0	0	12	12	6
			TOTAL	**0**	**0**	**12**	**12**	**7**

S.No	Course Category	Credits Per Semester								Total Credits	AICTE Norms
		1	2	3	4	5	6	7	8		
1	**HSMC**	**1**	**2**	**-**	**-**	**2**	**-**	**6**	**-**	**11**	**15**
2	**BSC**	**8**	**8**	**4**	**-**	**-**	**-**	**-**	**-**	**20**	**23**
3	**ESC**	**9**	**11**	**4**	**-**	**-**	**-**	**-**	**-**	**24**	**17**
4	**PCC**	**3**	**-**	**7.5**	**16**	**15.5**	**14**	**6**	**-**	**62**	**61**
5	**PEC**	**-**	**-**	**-**	**3**	**3**	**3**	**3**	**-**	**12**	**12**
6	**OEC**	**-**	**-**	**3**	**3**	**3**	**3**	**-**	**-**	**12**	**12**
7	**EEC**	**2**	**1**	**2**	**2**	**-**	**3**	**5**	**7**	**22**	**20**
8	**MC**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**0**	**0**
		23	**22**	**20.5**	**24**	**23.5**	**23**	**20**	**7**	**163**	**160**
									Total	**163**	

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

PERI Institute of Technology
OPEN ELECTIVE COURSES: VERTICALS

Offered by CIVIL		Offered by CSE		Offered by ECE		Offered by EEE		Offered by MECH	
Sub Code	**Sub Title**	**Sub Code**	**Sub Title**	**Sub Code**	**Sub Title**	**Sub Code**	**Sub Title**	**Sub Code**	**Sub Title**
24CEO01	Fundamental of Civil Engineering Drawing and Drafting	24CSO01	Basic Python Programming	24ECO01	Digital System Design with Verilog	24EEO01	Computer aided Electrical Design	24MEO01	AutoCAD
24CEO02	Advanced CAD based Civil Engineering Drawing Laboratory	24CSO02	Advanced Python Programming	24EC512	Microcontroller and Embedded System	24EEO02	Grid Interactive Non-conventional energy resources Techniques	24MEO02	Solid Works
24CEO03	Civil Engineering Modeling Laboratory	24CSO03	Core Java Programming	24ECO02	Embedded Systems with IoT Applications	24EEO03	Industrial Automation using PLC and SCADA	24MEO03	ANSYS
24CEO04	Computational Structural Analysis Laboratory	24ADE12	Advanced Java Programming	24ECO03	CMOS VLSI Design	24EEO04	Fundamentals of Electric Vehicle Architecture	24MEC04	Mechanical Electrical and Plumbing Engineering
		24AD304	Fundamentals of Artificial Intelligence						
		24CSO04	Artificial Intelligence and Machine Learning fundamentals						
		24CSO05	IoT Concepts and Applications						
		24AD507	Database Management System						
		24CSE08	Advanced Database						

			Management System						
		24AM301	Principles of Artificial Intelligence						

MANAGEMENT ELECTIVE

S.NO.	COURSE CODE	COURSETITLE	CATEGORY	PERIODS PER WEEK			TOTAL CONTACT PERIODS	CREDITS
				L	T	P		
1	24HSE01	Economics for Electronics Engineers	HSMC	3	0	0	3	3
2	24HSE02	Cost Management for Engineering Projects	HSMC	3	0	0	3	3
3	24HSE03	Industrial Management	HSMC	3	0	0	3	3
4	24HSE04	Business Basic for Entrepreneur	HSMC	3	0	0	3	3
5	24HSE05	Entrepreneurship Management	HSMC	3	0	0	3	3
6	24HSE06	Resource Management Techniques	HSMC	3	0	0	3	3
7	24HSE07	Management Theory and Practice	HSMC	3	0	0	3	3
8	24HSE08	Accounting and Finance	HSMC	3	0	0	3	3