

RAJALAKSHMI ENGINEERING COLLEGE

(AN AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY)

B.E ELECTRONICS AND COMMUNICATION ENGINEERING

REGULATIONS – 2023

CHOICE BASED CREDIT SYSTEM

CURRICULUM

SEMESTER I								
S.NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY COURSES								
1	HS23111	Technical Communication I	HS	2	2	0	0	2
2	GE23117	தமிழர் மரபு /Heritage of Tamils	HS	1	1	0	0	1
3	MA23111	Linear Algebra and Calculus	BS	4	3	1	0	4
LAB ORIENTED THEORY COURSES								
4	EC23131	Electron Devices	PC	5	3	0	2	4
5	CY23131	Chemistry for Electronics Engineering	BS	5	3	0	2	4
6	GE23131	Programming using C	ES	7	1	0	6	4
LABORATORY COURSE								
7	GE23122	Engineering Practices -Electrical and Electronics	ES	2	0	0	2	1
MANDATORY COURSE								
8	MC23111	Indian Constitution and Freedom Movement	MC	3	3	0	0	0
TOTAL				29	16	1	12	20

SEMESTER II								
S.NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY COURSES								
1	MA23212	Differential Equations and Complex Variables	BS	4	3	1	0	4
2	GE23217	தமிழரும் தொழில்நுட்பமும் / Tamils Technology	HS	1	1	0	0	1
LAB ORIENTED THEORY COURSES								
3	EE23132	Basic Electrical Engineering	ES	5	3	0	2	4
4	PH23232	Physics for Electronics Engineering	BS	5	3	0	2	4
5	CS23231	Data Structures	ES	7	3	0	4	5
6	GE23111	Engineering Graphics	ES	6	2	0	4	4
LABORATORY COURSES								
7	GE23121	Engineering Practices- Civil and Mechanical	ES	2	0	0	2	1
8	HS23221/ HS23222	Technical Communication II / English for Professional Competence	HS	2	0	0	2	1
MANDATORY COURSE								
9	MC23112	Environmental Science and Engineering	MC	3	3	0	0	0
TOTAL				35	18	1	16	24

SEMESTER III								
S.NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY COURSES								
1	MA23312	Fourier Series and Number Theory	BS	4	3	1	0	4
2	EC23311	Analog Circuits –I	PC	3	3	0	0	3
3	EC23312	Electromagnetic Fields	PC	3	3	0	0	3
4	EC23313	Digital Principles and System Design	PC	3	3	0	0	3
LAB ORIENTED THEORY COURSES								
5	EC23331	Microprocessors and Microcontrollers	PC	5	3	0	2	4
6	CS23336	Introduction to Python Programming	ES	5	1	0	4	3
LABORATORY COURSE								
7	EC23321	Analog and Digital Circuits Laboratory	PC	4	0	0	4	2
TOTAL				27	16	1	10	22

SEMESTER IV								
S.NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY COURSES								
1	EC23411	Signals and Systems	PC	3	3	0	0	3
2	EC23412	Transmission Lines and Waveguides	PC	3	3	0	0	3
3	EC23413	Communication Theory	PC	3	3	0	0	3
LAB ORIENTED THEORY COURSES								
4	EC23431	Analog Circuits-II	PC	5	3	0	2	4
5	MA23436	Probability and Random Processes	BS	5	3	0	2	4
LABORATORY COURSES								
6	GE23327	Soft Skills-I	EEC	2	0	0	2	1
7	CS23422	Python Programming for Machine Learning	ES	4	0	0	4	2
TOTAL				25	15	0	10	20

SEMESTER V								
S.NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY COURSES								
1	EC23511	Control System Engineering	PC	3	2	1	0	3
2	EC23512	Modern Digital Communication	PC	3	3	0	0	3
3		Open Elective-I	OE	3	3	0	0	3
4		Professional Elective-I	PE	3	3	0	0	3
5		Professional Elective-II	PE	3	3	0	0	3
LAB ORIENTED THEORY COURSE								
6	EC23531	Digital Signal Processing	PC	5	2	1	2	4
LABORATORY COURSES								
7	EC23521	Communication Systems Laboratory	PC	4	0	0	4	2
8	EC23522	Industrial Internship	EEC	2	0	0	2	1
9	GE23427	Soft Skills-II	EEC	2	0	0	2	1
TOTAL				28	16	2	10	23

SEMESTER VI								
S.NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY COURSES								
1	EC23611	Antenna Theory and Wave Propagation	PC	3	3	0	0	3
2		Open Elective-II	OE	6	0	0	6	3
LAB ORIENTED THEORY COURSES								
3	EC23631	VLSI and Chip Design	PC	5	3	0	2	4
4	EC23632	Communication Networks	PC	5	3	0	2	4
5	EC23633	Wireless Communication	PC	4	2	0	2	3
LABORATORY COURSES								
6	GE23627	Problem Solving Techniques	EEC	2	0	0	2	1
7	EC23621	Design Thinking for Innovation in ECE	EEC	4	0	0	4	2
TOTAL				29	11	0	18	20

SEMESTER VII								
S.NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY COURSES								
1		Professional Elective-III	PE	3	3	0	0	3
2		Professional Elective- IV	PE	3	3	0	0	3
LAB ORIENTED THEORY COURSES								
3	EC23731	Optical Communication and Networks	PC	4	2	0	2	3
4	EC23732	RF and Microwave Engineering	PC	4	2	0	2	3
5	EC23733	Embedded and Real Time Systems	PC	5	3	0	2	4
LABORATORY COURSE								
6	EC23721	Artificial Intelligence and Machine Learning for Electronic Engineering	EEC	4	0	0	4	2
TOTAL				23	13	0	10	18

SEMESTER VIII								
S.NO	COURSE CODE	COURSE TITLE	CATEGORY	CONTACT PERIODS	L	T	P	C
THEORY COURSES								
1		Professional Elective-V	PE	3	3	0	0	3
2		Professional Elective-VI	PE	3	3	0	0	3
LABORATORY COURSE								
3	EC23821	Project work	EEC	20	0	0	20	10
TOTAL				26	6	0	20	16
TOTAL NUMBER OF CREDITS:				163				

B.E ELECTRONICS AND COMMUNICATION ENGINEERING
CREDITS DISTRIBUTION

S. NO	COURSE CATEGORY	CREDITS PER SEMESTER								PROPOSED CURRICULUM
		1	2	3	4	5	6	7	8	
1	HS	3	2							5
2	BS	8	8	4	4					24
3	ES	5	14	3	2					24
4	PC	4		15	13	12	14	10		68
5	PE					6		6	6	18
6	OE					3	3			6
7	GE									0
8	EEC				1	2	3	2	10	18
9	MC	*	*							Non credits
	Total	20	24	22	20	23	20	18	16	163

VERTICAL 1 SIGNAL AND IMAGE PROCESSING	VERTICAL 2 RF AND ADVANCED COMMUNICA TIONS	VERTICAL 3 SEMICONDUCT OR AND VLSI DESIGN	VERTICAL 4 HIGH SPEED NETWORKS	VERTICAL 5 MEMS AND IOT	VERTICAL 6 SPACE TECHNOLOGIES
EC23A11 - Medical Electronics	EC23B11 - Information Theory and Coding	EC23C11 - System on Chip and FPGA Testing	EC23D11 - Wireless Networks	EC23E11 - Introduction to MEMS	EC23F11 - Satellite Communication
EC23A12 - Biosensing and its Analysis	EC23B12 - Cognitive Radio	EC23C12 - Physical Design automation	EC23D12 - Wireless Sensor Networks	EC23E12 - MEMS and Microfluidic Technologies	EC23F12 - Radar Technologies
EC23A13 - Statistical Signal Processing	EC23B13 - Advanced Communication Systems	EC23C13 - Digital IC Design	EC23D13 - Network Routing Algorithms	EC23E13 - BioMEMS	EC23F13 - Avionics Systems
EC23A14 - Digital Image Processing	EC23B14 - Electromagnetic Interference and Compatibility	EC23C14 - Functional Verification of SOCs	EC23D14 - Multimedia Compression and Networking	EC23E14 - Biomaterials and Applications	EC23F14 - Positioning and Navigation Systems
EC23A15 - Image and Video Analysis	EC23B15 - Millimeter Wave Communication	EC23C15 - Computer architecture	EC23D15 - Internetworking multimedia	EC23E15 - Nanotechnology and Applications	EC23F15 - Remote Sensing
EC23A16 - Speech and Audio Processing	EC23B16 - Advanced Antenna Technologies	EC23C16 - Semiconductor Packaging	EC23D16 - Cryptography and Network Security	EC23E16 - Sensor Technology	EC23F16 - Space Mechanics
EC23A17 - Fundamentals of Machine Learning	EC23B17 - RF Circuit Design and RADAR Engineering	EC23C17 - VLSI Testing and Testability	EC23D17 - Software Defined Networks	EC23E17 - IoT Communication Technologies	EC23F17 - Rocket Propulsion
EC23A18 - Introduction to Deep Learning	EC23B18 - 5G Physical Layer Technologies	EC23C18 - Computational VLSI and IoT for AI	EC23D18 - High Performance Computing for Cyber Physical Systems	EC23E18 - Industry 4.0 and IIoT	EC23F18 - Drone Technologies