

Department of Electrical Engineering

Teaching Scheme of B. Tech.-I (Semester I & II) (Electrical Engineering)

SEMESTER – I (Effective from 2022-2023)

Sr. No.	Subject	Code	Scheme	Credit
1	Mathematics-I	MA 101 S1	3-1-0	04
2	Physics-I	PH 102 S1	3-0-2	04
3	Branch Specific Course -I (Basic Electrical Engineering)	EE 103 S1	3-0-2	04
4	Chemistry	CY 104 S1/S2	3-0-2	04
5	Engineering Drawing	CIME 105 S1/S2	2-0-4	04
6	Energy and Environmental Engineering	CIME 106 S1/S2	3-0-2	04
7	Holistic Empowerment and Human Values*	HU 107 S1/S2	3-0-0	00
		Total	20-1-12=33	24

* Audit Course (attendance would be compulsory as per institute norms)

SEMESTER – II (Effective from 2022-2023)

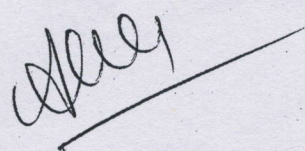
Sr. No.	Subject	Code	Scheme	Credit
1	Mathematics-II	MA 112 S2	3-1-0	04
2	Physics-II	PH 113 S2	4-0-0	04
3	Branch Specific Course -II (Electronics Devices & Circuits)	EC 114 S2	3-0-2	04
4	Engineering Mechanics	AM 108 S2/S1	3-0-2	04
5	Fundamentals of Computers & Programming	CO 109 S2/S1	3-0-2	04
6	English & Professional Communications	HU 110 S2/S1	3-0-0	03
7	Workshop Practice	ME 111 S2/S1	0-0-4	02
		Total	19-1-10=30	25

S1 = Semester-1, S2 = Semester-2

AM = Applied Mechanics, CH = Chemical, CI = Civil, CO = Computer,

ME = Mechanical, EE = Electrical, EC = Electronics,

PH = Physics, CY = Chemistry, MA = Mathematics, HU = Humanities, MG = Management



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5	Fundamentals of Computers & Programming	CO 109 S2/S1	3-0-2	04
6	English & Professional Communications	HU 110 S2/S1	3-0-0	03
7	Workshop Practice	ME 111 S2/S1	0-0-4	02
		Total	18-1-12=31	25

Semester – II (Effective from 2022-2023)

Sr. No.	Subject	Code	Scheme	Credit
1	Mathematics-II	MA 112 S2	3-1-0	04
2	Physics-II	PH 113 S2	4-0-0	04
3	Branch Specific Course -I (Basic Electrical Engineering)	EE 103 S2	3-0-2	04
4	Chemistry	CY 104 S1/S2	3-0-2	04
5	Engineering Drawing	CIME 105 S1/S2	2-0-4	04
6	Energy and Environmental Engineering	CIME 106 S1/S2	3-0-2	04
7	Holistic Empowerment and Human Values*	HU 107 S1/S2	3-0-0	00
		Total	21-1-10=32	24

* Audit Course (attendance would be compulsory as per institute norms)

S1 = Semester-1, S2 = Semester-2

AM = Applied Mechanics, CH = Chemical, CI = Civil, CO = Computer,

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Department of Electrical Engineering

SEMESTER – III (Effective from 2022-2023)

Sr. No.	Subject	Code	Scheme	Credit
1	Mathematics-III	MA217	3-1-0	04
2	Electric Circuits	EE201	4-1-0	05
3	Electrical Machines I	EE203	3-1-2	05
4	Digital Circuits	EC211	3-1-2	05
5	Introduction to Data Structure	CS207	3-0-2	04
		Total	16-4-6=26	23

SEMESTER – IV (Effective from 2022-2023)

Sr. No.	Subject	Code	Scheme	Credit
1	Numerical Methods Applications for Electrical Engineering (to be taught by the concerned Department) [#]	EE202	3-1-2	05
2	Electrical Machines II	EE204	3-1-2	05
3	Elements of Power Systems	EE206	3-1-2	05
4	Electromagnetic Field Theory	EE208	3-1-0	04
5	Signals & Systems	EE212	3-1-0	04
		Total	15-5-6=26	23

Resolution 4 of 58th DAAC meeting held on 07/01/2022

Department of Electrical Engineering

SEMESTER -V (Effective from 2022-2023)

Sr. No.	Subject	Code	Scheme	Credit
1	Professional Ethics, Economics & Management#	HU353	3-1-0	04
2	Power System Analysis	EE301	3-1-2	05
3	Control Systems	EE303	3-1-2	05
4	Power Electronic Converters	EE305	3-1-2	05
5	EIS-I	--	3-0-0	03
6	Electrical and Electronic Measurements	EE307	3-1-2	05
7	Seminar	EE309	0-0-2	01
		Total	18-5-10=33	28

SEMESTER -VI (Effective from 2022-2023)

Sr. No.	Subject	Code	Scheme	Credit
1	Power Electronics System and Electric Drives	EE304	3-1-2	05
2	Microprocessor & Microcontrollers	EE306	3-1-2	05
3	Instrumentation	EE308	3-1-2	05
4	EIS-II	--	3-0-0	03
5	ES-I	EE3AA	3-0-0	03
6	ES-II	EE3BB	3-0-0	03
7	ES-III	EE3CC	3-0-0	03
		Total	21-3-6=30	27

One hour will be engaged by the core department.



Department of Electrical Engineering

SEMESTER -VII (Effective from 2023-2024)

Sr. No.	Subject	Code	Scheme	Credit
1	Microcontroller and Embedded 'C' Programming	EE401	3-0-2	04
2	Electrical Machine Design	EE403	3-1-0	04
3	Switch Gear and Protection	EE405	3-0-2	04
4	ES-IV	EE4AA	3-0-0	03
5	ES-V	EE4BB	3-0-0	03
6	ES-VI	EE4CC	3-0-0	03
7	Project	EE407	0-0-6	03
		Total	18-1-10=29	24

SEMESTER -VIII (Effective from 2023-2024)

Sr. No.	Subject	Code	Scheme	Credit
1	Internship Training in Industry/Academic Institute/Research Organization	EE402	0-0-20	10
		Total	0-0-20=20	10

Total credits= 184

Department of Electrical Engineering

ELECTIVE INTERDISCIPLINARY SUBJECTS- EIS-I (EE3XX) (INSTITUTE LEVEL)	
Course Code	Subject Name
EE361	Renewable Energy Sources
EE363	Optimization Methods
EE365	Forecasting and Planning Methods
EE367	Fundamental of Electrical Power Systems (Non-Electrical Students)
EE369	Modern Electrical Drives (Non-Electrical Students)
EE371	Introduction to Power Electronics Converters (Non-Electrical Students)

ELECTIVE INTERDISCIPLINARY SUBJECTS- EIS-II (EE3YY) (INSTITUTE LEVEL)	
Course Code	Subject Name
EE362	Industrial Automation and Process Control
EE364	State Variable Analysis
EE366	Energy Audit and Management
EE368	Advanced Materials for Energy Applications
EE372	Distributed Power Generation and Micro-grids
EE374	Electromagnetic Field Theory (Non-Electrical Students)

CORE ELECTIVE SUBJECTS- ES-I (EE3AA) (DEPARTMENT LEVEL)	
Course Code	Subject Name
EE322	Power Plant Engineering
EE324	Adaptive Control and Soft Computing
EE326	Utilization of Electrical Energy
EE328	Modelling and Simulation of Electrical Machines
EE332	Random Processes
EE334	Artificial Intelligent Techniques

CORE ELECTIVE SUBJECTS- ES-II (EE3BB) (DEPARTMENT LEVEL)	
Course Code	Subject Name
EE338	Power Quality Disturbances and Mitigations
EE342	High Voltage Engineering
EE344	FACTS Devices
EE346	Discrete-Time control Systems
EE348	Restructuring and Deregulation of Power Systems
EE352	Special Electrical Machines

Department of Electrical Engineering

CORE ELECTIVE SUBJECTS- ES-III (EE3CC) (DEPARTMENT LEVEL)	
Course Code	Subject Name
EE354	Advanced Electrical Drives
EE356	Electronic Instrumentation and Control
EE358	Power System Transients
EE376	Advanced Industrial Automation
EE378	Reliability Evaluation of Electrical Systems
HU312	Innovation, Incubation and Entrepreneurship (To be taught by DoAMH)

CORE ELECTIVE SUBJECTS- ES-IV (EE4AA) (DEPARTMENT LEVEL)	
Course Code	Subject Name
EE421	Electrical Traction and Linear Machines
EE423	EHV AC Transmission
EE425	Advanced Power Electronics
EE427	Nonlinear and Optimal Control
EE429	Advanced Microcontroller (Digital Signal Controller)
EE431	Industrial Instrumentation
EE433	Power System Operation and Control
EE435	Wind and Solar Energy Conversion Systems

CORE ELECTIVE SUBJECTS- ES-V (EE4BB) (DEPARTMENT LEVEL)	
Course Code	Subject Name
EE437	Power Filter Technology
EE439	Smart Grid Technology
EE441	HVDC Transmission
EE443	Electric Vehicles
EE445	Digital Signal Processing
EE447	Modern Materials for Electrical Engineering
EE449	Special Electrical Machines and Drives

CORE ELECTIVE SUBJECTS- ES-VI (EE4CC) (DEPARTMENT LEVEL)	
Course Code	Subject Name
EE451	Switch Mode Power Supply
EE453	Computer Methods for Power Systems [#]
EE455	Robotics
EE457	Communication Engineering
EE459	VLSI Technology
EE461	Antenna and Wave Propagation
EE463	Cryptography and Cyber Security for Smart Grid

Resolution 3 of 58th DAAC meeting held on 07/01/2022

