

School of Engineering and Applied Sciences

B. Tech Electrical and Electronics Engineering

Academic Batch: 2020-2024

Department of Electrical and Electronics Engineering

SRM University-AP, Andhra Pradesh

Syllabus B. Tech in Electrical and Electronics Engineering

SEMESTER-I						
S. No	Course Code	Course Name	L	T	P	C
1	EGL 101	Communicative English	3	0	0	3
2	EEE 101	Fundamentals of Electrical Engineering	3	0	0	3
3	MAT 112	Single Variable Calculus	3	0	0	3
4	PHY 101	Engineering Physics	3	0	0	3
5	PHY 101 L	Engineering Physics Lab	0	0	2	1
6	CSE 105	Introduction to Programming using C	3	0	0	3
7	CSE 105 L	Introduction to Programming Using C Lab	0	0	2	1
8	ENV 111	Environmental Science	2	0	0	2
9	ENV 111 L	Environmental Science Lab	0	0	2	1
10	ISES 101	Industry Specific Employability Skills	1	1	0	1
Total						21

SEMESTER-II						
S. No	Course Code	Course Name	L	T	P	C
1	MAT 121	Multi Variable Calculus	3	0	0	3
2	EGL 125	Critical Thinking	4	0	0	4
3	PHY 113	Field Theory	2	0	2	3
4	CSE 107	Data Structures	3	0	0	3
5	CSE 107 L	Data Structures Lab	0	0	2	1
6	MAT 221	Probability & Statistics for Engineers	3	0	0	3
7	PHY 102	Solid State Device Physics	3	0	0	3
8	PHY 102 L	Solid State Device Physics Lab	0	0	2	1
9	ENG 111	Basic Electronics	3	0	0	3

10	ENG 111 L	Basic Electronics Lab	0	0	2	1
11	ISES 102	Industry Specific Employability Skills II	1	1	0	1
Total						26
SEMESTER-III						
S. No	Course Code	Course Name	L	T	P	C
1	EEE 201	Electrical and Electronics Measurement	3	0	0	3
2	EEE 201 L	Electrical and Electronics Measurement Lab	0	0	2	1
3	EEE 202	Electrical Circuits Theory	3	0	0	3
4	EEE 202 L	Electrical Circuits Theory Lab	0	0	2	1
5	ECE 211	Digital Electronics	2	1	0	3
6	ECE 211 L	Digital Electronics Lab	0	0	2	1
7	ECE 212	Signals and Systems	3	0	0	3
8	ECE 212 L	Signals and Systems Lab	0	0	2	1
9	CSE 206	Object Oriented Programming with C++	3	0	0	3
10	CSE 206 L	Object Oriented Programming with C++ Lab	0	0	2	1
11	MAT 131	Differential Equations	3	0	0	3
12	ISES 201	Industry Specific Employability Skills-III	1	1	0	1
13	CSE 230	Industry Standard Coding Practice-1	0	0	4	1
Total						25

SEMESTER-IV						
S. No	Course Code	Course Name	L	T	P	C
1	EEE 203	Control Systems	3	0	0	3
2	EEE 203 L	Control Systems Lab	0	0	2	1
3	EEE 204	DC Machines and Transformers	3	0	0	3
4	EEE 204 L	DC Machines and Transformers Lab	0	0	2	1
5	TE	Technical Elective-1	3	0	0	3
6	ECE 221	Analog Electronics	3	0	0	3
7	ECE 221 L	Analog Electronics Lab	0	0	2	1
8	OE	Open Elective-1	3	0	0	3
9	MAT 211	Linear Algebra	3	0	0	3
10	ISES 202	Industry Specific Employability Skills-IV	1	1	0	1
11	CSE 330	Industry Standard Coding Practice- 2	0	0	4	1
Total						23

SEMESTER-V						
S. No	Course Code	Course Name	L	T	P	C
1	EEE 302	Induction and Synchronous Machines	3	0	0	3
2	EEE 302 L	Induction and Synchronous Machines Lab	0	0	2	1
3	EEE 304	Fundamentals of Power System	3	0	0	3
4	EEE 308	Power Electronics	3	0	0	3
5	EEE 308 L	Power Electronics Lab	0	0	2	1

6	TE	Stream Specific Elective-1/Technical Elective-2	3	0	0/2	3/4
7	OE	Open Elective-2	3	0	0/2	3/4
8	ISES 301	Industry Specific Employability Skills-V	1	1	0	0
9	CSE 331	Industry Standard Coding Practice - 3	0	0	4	1
Total						18/20
SEMESTER-VI						
S. No	Course Code	Course Name	L	T	P	C
1	EEE 306	Power System Analysis	3	0	0	3
2	EEE 306 L	Power System Analysis Lab	0	0	2	1
3	TE	Stream Specific Elective-2/Technical Elective-3	3	0	0/2	3/4
4	OE	Open Elective-3	3	0	0/2	3/4
5	OE	Open Elective-4	3	0	0	3
6	EEE 310 P	Undergraduate Research Opportunity Project	0	0	6	3
7	ISES 302	Industry Specific Employability Skills-VI	1	1	0	0
Total						16/18
SEMESTER-VII						
S. No	Course Code	Course Name	L	T	P	C
1	EEE 401	Switch Gear and Protection	3	0	0	3
2	EEE 401 L	Switch Gear and Protection Lab	0	0	2	1
3	EEE 402	High Voltage Engineering	3	0	0	3
4	EEE 402 L	High Voltage Engineering Lab	0	0	2	1
5	TE	Stream Specific Elective-3/Technical Elective-4	3	0	0	3
6	TE	Stream Specific Elective-4/Technical Elective-5	3	0	0	3
7	OE	Open Elective-5	3	0	0	3
Total						17
SEMESTER-VIII						
S. No	Course Code	Course Name	L	T	P	C
1	EEE 410 P	Capstone Project	0	0	24	12
Total						12
Total Credits						158/162

Course Category	Category Code	No of Courses	Credits in curriculum
Humanities and Social Sciences	HS	8	11
Basic Sciences	BS	10	25
Engineering Sciences	ES	14	26
Professional Core	C	25	51
Technical Elective	TE	6	15/17
Open Elective	OE	7	15/17
Project	PR	2	15
	Total	72	158/162

List of Stream Specific Electives					
Course Code	Course Name	L	T	P	C
Smart Grid					
EEE 2XX	Introduction to Smart Grid	3	0	0	3
EEE 3XX	Distributed Generation and Micro Grids	3	0	0	3
EEE 3XX	Intelligence and Communication in Smart Grid	3	0	0	3
EEE 4XX	Power Electronic Converters for Smart Grids	3	0	0	3
E-Mobility					
EEE 2XX	Introduction to Hybrid and Electric Vehicles	3	0	0	3
EEE 3XX	Communication Networks for Electric Vehicles	3	0	0	3
EEE 3XX	Electric Vehicle Batteries and Charging Systems	3	0	0	3
EEE 4XX	Power Electronic Converters for Electric Vehicles	3	0	0	3
Energy Efficient Systems					
EEE 2XX	Renewable Energy Sources	3	0	0	3
EEE 3XX	Distributed Generation and Micro Grids	3	0	0	3
EEE 3XX	Grid Integration of Renewable Energy	3	0	0	3
EEE 4XX	Intelligent Grid Technologies and Applications	3	0	0	3

List of Technical Electives					
Course Code	Course Name	L	T	P	C
EEE 311	Non - Linear Systems and Control	3	0	0	3
EEE 312	Renewable Energy Systems	3	0	0	3
EEE 315	Artificial Neural Networks	3	0	0	3
EEE 421	Linear Systems	3	0	0	3
EEE 422	Optimization Techniques	3	0	0	3
EEE 423	Switched Mode DC DC Power Converters	3	0	0	3
EEE 424	High Voltage DC Transmission	3	0	0	3
EEE 425	Power System Operation and Control	3	0	0	3
EEE 426	Pulsed power systems	3	0	0	3
EEE 427	Flexible AC transmission system (FACTS)	3	0	0	3
EEE 428	Power Semiconductor Drives	3	0	0	3
EEE 429	Economics of Power Generation	3	0	0	3
EEE 439	Computational Techniques in Electrical Engineering	3	0	0	3

List of Open Electives					
Course Code	Course Name	L	T	P	C
ECE 222	Digital Signal Processing	3	0	2	4
ECE 313	Microprocessors and Interfacing	3	0	2	4
ECE 319	Microcontrollers and Applications	3	0	2	4