School of Engineering and Applied Sciences

B. Tech Electrical and Electronics Engineering

Academic Batch: 2022-2026

Department of Electrical and Electronics Engineering
SRM University-AP, Andhra Pradesh
Syllabus B. Tech in Electrical and Electronics Engineering

SEMESTER-I						
S. No	**Category**	**Course Name**	**L**	**T**	**P**	**C**
1	AEC	Communicative English	3	0	0	3
2	VAC	Environmental Science	2	0	0	2
3	SEC	Industry Specific Employability Skills-1	0	0	1	1
4	SEC	Exploratory Learning and Discovery	0	0	1	1
5	SEC	Orientation on Internationalization	0	0	1	1
6	FIC	Engineering Physics	2	0	1	3
7	FIC	Calculus	3	0	0	3
8	FIC	Introduction to Programming using C	3	0	1	4
9	FIC	Introductory Biology for Engineers	2	0	0	2
Total						**20**

SEMESTER-II						
S. No	**Course Code**	**Course Name**	**L**	**T**	**P**	**C**
1	SEC	Data Structures	3	0	1	4
2	SEC	Industry Specific Employability Skills-2	0	0	2	2
3	SEC	Industry Standard Coding Practice-2	0	0	1	1
4	FIC	Fundamentals of Chemistry for Engineers	2	0	1	3
5	FIC	Principles of Economics	3	0	0	3
6	FIC	Probability and Statistics for Engineers	3	0	0	3
7	FIC	Linear Algebra	3	0	0	3
8	CC	Basic Electrical and Electronics Engineering.	3	0	1	4
Total						**23**
SEMESTER-III						
S. No	**Course Code**	**Course Name**	**L**	**T**	**P**	**C**

1	AEC	Problem Solving Skills	1	0	1	2
2	VAC	Co-Curricular Activities	0	0	2	2*
3	VAC	Community Engagement	2	0	0	2*
4	SEC	Solid State Devices and High Electron Mobility Transistors (HEMTs)	2	0	0	2
5	FIC	Differential Equations	3	0	0	3
6	CC	Circuit Theory	3	0	1	4
7	CC	Electrical Machines-1	3	0	1	4
8	CC	Electromagnetic Field Theory	3	0	0	3
9	CC	Digital Electronics	3	0	1	4
10	OE/Minor	OE/ Minor -I				3
Total						25

SEMESTER-IV						
S. No	**Course Code**	**Course Name**	**L**	**T**	**P**	**C**
1	AEC	Creativity and Critical thinking Skills	1	0	1	2
2	VAC	Co-Curricular Activities	0	0	2	2*
3	VAC	Community Engagement	2	0	0	2*
4	SEC	Measurement and Instrumentation	3	0	1	4
5	CC	Power Generation, Transmission and Distribution	3	0	1	4
6	CC	Electrical Machines-II	3	0	1	4
7	CC	Analog Circuits	3	0	1	4
8	CC	Linear Systems and Control Design	3	0	1	4
9	OE/Minor	OE/Minor-II				3
Total						**25**
SEMESTER-V						
S. No	**Course Code**	**Course Name**	**L**	**T**	**P**	**C**
1	VAC	Co-Curricular Activities	0	0	2	2*
2	VAC	Community Engagement	2	0	0	2*
3	SEC	Career Skills-1				3
4	CC	Principles of Signal Processing	3	0	0	3
5	CC	Power System Analysis	3	0	1	4
6	CC	Nonlinear Systems and Control	2	0	1	3
7	CC	Power Electronics	3	0	1	4
8	CC	Microcontrollers and Applications	2	0	1	3
9	OE/Minor	OE/Minor-III				3
Total						**23**
SEMESTER-VI						
S. No	**Course Code**	**Course Name**	**L**	**T**	**P**	**C**
1	VAC	Co-Curricular Activities	0	0	2	2

2	VAC	Community Engagement	2	0	0	2
3	SEC	Career Skills-2				**3**
4	CC	High Voltage Engineering	3	0	1	4
5	CC	Switchgear and Protection	3	0	1	4
6	CC	Renewable Energy Sources	3	0	1	4
7	CE/SE	Core/Stream Elective	3	0	0	3
8	CE/SE	Core/Stream Elective	3	0	0	3
9	OE/Minor	OE/Minor-IV				3
Total						**28**
SEMESTER-VII						
S. No	**Course Code**	**Course Name**	**L**	**T**	**P**	**C**
1	CE/SE	Core/Stream Elective	3	0	0	3
2	CE/SE	Core/Stream Elective	3	0	0	3
3	CE/SE	Core/Stream Elective				2
4	RDIP	Internship	0	0	4	4
5	OE/Minor	OE/Minor-V				3
Total						**15**
SEMESTER-VIII						
S. No	**Course Code**	**Course Name**	**L**	**T**	**P**	**C**
1	RDIP	Major Project	0	0	12	12
Total						**12**
Total Credits					**171**	

EEE

Semester										
Category	**S1**	**S2**	**S3**	**S4**	**S5**	**S6**	**S7**	**S8**	**Total**	**%age**
Ability Enhancement Courses (AEC)	3	0	2	2	0	0	0	0	7	4.32098765
Value Added Courses (UG Common) (VAC)	2	0	4	0	0	4	0	0	10	6.17283951
Skill Enhancement Courses (SEC)	3	7	2	4	3	3	0	0	22	13.5802469
Multidisciplinary / Interdisciplinary /Foundation Core (MIC)	12	12	3	0	0	0	0	0	27	16.6666667
Major Core + Specialization (CC)	0	4	15	16	17	18	8	0	78	48.1481481
Minor (MC) + Open Elective (OE)	0	0	3	3	3	3	3	0	15	9.25925926
Research / Design / Industrial Practice / Project (RDIP)	0	0	0	0	0	0	4	12	16	9.87654321
Grand Total	20	23	25	25	23	28	15	12	171	100

Course Category	**Category Code**
Ability Enhancement Courses	AEC
Value Added Courses (UG Common)	VAC
Skill Enhancement Courses	SEC
Multidisciplinary / Interdisciplinary /Foundation Core	MIC
Major Core + Specialization	CC
Minor + Open Elective	OE
Research / Design / Industrial Practice / Project	RDIP

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