

Department of Electrical and Electronics Engineering

B.Tech. Electrical and Electronics Engineering Curriculum

(Applicable to the students admitted from AY: 2025 onwards)



**School of Engineering and Sciences
SRM University AP, Andhra Pradesh**

ABBREVIATIONS

AEC	Ability Enhancement Courses
VAC	Value Added Courses
SEC	Skill Enhancement Courses
FIC	Foundation & Interdisciplinary Courses
OE	Open Elective
RDIP	Research / Design / Industrial Practice / Project / Thesis / Internship
CE	Core Elective
CC	Core Course
SE	Stream Elective
TE	Technical Elective

SEMESTER – I							
S. No	Category	Sub-Category	Course Title	L	T/D	P/P r	C
1	AEC	U AEC	Art of Listening, Speaking and Reading Skills	1	0	1	2
2	VAC	U VAC	Environmental Science	2	0	0	2
3	SEC	S SEC	Analytical Reasoning and Aptitude Skills	1	1	1	3
4	FIC	S FIC	Emerging Technologies	2	0	0	2
5	FIC	S FIC	Engineering Physics	2	0	1	3
6	FIC	S FIC	Calculus For Engineers	3	0	0	3
7	FIC	S FIC	Fundamentals of Computing and Programming in C	3	0	1	4
Semester Total				14	1	4	19

SEMESTER - II							
S. No	Category	Sub-Category	Course Title	L	T/D	P/P r	C
1	AEC	U AEC	Effective Writing and Presentation Skills	1	0	1	2
2	VAC	U VAC	Universal Human Values and Ethics	2	0	0	2
3	SEC	S SEC	Entrepreneurial Mindset	2	0	0	2
4	FIC	S FIC	Fundamentals of Chemistry for Engineers	2	0	1	3
5	FIC	S FIC	Linear Algebra and Differential Equations	3	0	0	3
6	CC	Core	Basic Electrical and Electronics Engineering	2	0	1	3
7	CC	Core	Measurements and Instrumentation	3	0	1	4
Semester Total				15	0	4	19

SEMESTER - III							
S. No	Category	Sub-Category	Course Title	L	T/D	P/P r	C
1	AEC	S AEC	Problem Solving Skills	1	0	1	2
2	VAC	S VAC	Co-Curricular Activities	0	0	2	2*
3	VAC	S VAC	Community Service and Social Responsibility	0	0	2	2*
4	SEC	D SEC	Data Structures	2	0	1	3
5	CC	Core	Circuit Theory	3	0	1	4
6	CC	Core	Electrical Machines - I	3	0	1	4
7	CC	Core	Electromagnetic Field Theory	3	0	0	3
8	CC	Core	Digital Electronics	3	0	1	4
9	Elective	OE	Open Elective	3	0	0	3
Semester Total				18	0	5	23

SEMESTER - IV							
S. No	Category	Sub-Category	Course Title	L	T/D	P/P r	C
1	AEC	U AEC	Creativity and Critical thinking Skills	1	0	1	2
2	VAC	U VAC	Co-Curricular Activities	0	0	2	2*
3	VAC	U VAC	Community Service and Social Responsibility	0	0	2	2*
4	SEC	D SEC	Semiconductor Devices	2	0	0	2
5	CC	Core	Power Generation, Transmission and Distribution	3	0	1	4
6	CC	Core	Electrical Machines - II	3	0	1	4
7	CC	Core	Analog Circuits	3	0	1	4
8	CC	Core	Linear Systems and Control Design	3	0	1	4
9	Elective	OE	Open Elective	3	0	0	3
Semester Total				18	0	5	23

SEMESTER - V							
S. No	Category	Sub-Category	Course Title	L	T/D	P/P r	C
1	VAC	U VAC	Co-Curricular Activities	0	0	2	2*
2	VAC	U VAC	Community Service and Social Responsibility	0	0	2	2*
3	SEC	E SEC	Career Skills - I	3	0	0	3
4	CC	Core	Principles of Signal Processing	3	0	0	3
5	CC	Core	Power System Analysis	3	0	1	4
6	CC	Core	Nonlinear Systems and Control	2	0	1	3
7	CC	Core	Power Electronics	3	0	1	4
8	CC	Core	Microcontrollers and Applications	2	0	1	3
9	RDIP	RDIP	Internship	0	0	4	4
10	Elective	OE	Open Elective	3	0	0	3
Semester Total				19	0	12	27

SEMESTER - VI							
S. No	Category	Sub-Category	Course Title	L	T/D	P/P r	C
1	VAC	U VAC	Co-Curricular Activities	0	0	2	2
2	SEC	E SEC	Career Skills - II	3	0	0	3
3	CC	Core	High Voltage Engineering	3	0	1	4
4	CC	Core	Switchgear and Protection	3	0	1	4
5	CC	Core	Renewable Energy Sources	3	0	1	4
6	Elective	CE	Core Elective	3	0	0	3
7	Elective	CE	Core Elective	3	0	0	3
8	Elective	OE	Open Elective	3	0	0	3
Semester Total				21	0	5	26

SEMESTER - VII							
S. No	Category	Sub- Category	Course Title	L	T/D	P/P r	C
1	Elective	CE	Core Elective	3	0	0	3
2	Elective	CE	Core Elective	3	0	0	3
3	Elective	CE	Core Elective	3	0	0	3
4	Elective	OE	Open Elective	3	0	0	3
Semester Total				12	0	0	12

SEMESTER - VIII							
S. No	Category	Sub- Category	Course Title	L	T/D	P/P r	C
1	RDIP	RDIP	Major Project	0	0	12	12
Semester Total				0	0	12	12

Core Electives							
S. No	Category	Sub-Category	Course Title	L	T/D	P/P r	C
1	Elective	CE	Numerical Methods for Electrical Engineering	3	0	0	3
2	Elective	CE	Indian Standards for Electrical Engineering Applications	3	0	0	3
3	Elective	CE	Power Semiconductor Drives	3	0	0	3
4	Elective	CE	Computer Aided Design of Electrical Machines	3	0	0	3
5	Elective	CE	Power System Operation and Control	3	0	0	3
6	Elective	CE	Switched Mode Power Converters	3	0	0	3
7	Elective	CE	Control of Switched Mode Power Converters	3	0	0	3
8	Elective	CE	Embedded Systems for Power Applications	3	0	0	3

Specialization: Renewable Energy							
S. No	Category	Sub-Category	Course Title	L	T/D	P/P r	C
1	Elective	CE	Design of Photovoltaic Systems	3	0	0	3
2	Elective	CE	Modelling and Control of Battery Energy Systems	3	0	0	3
3	Elective	CE	Power Quality Issues and Mitigation Techniques	3	0	0	3
4	Elective	CE	Renewable Energy Integration with the Grid	3	0	0	3
5	Elective	CE	Control of Power Converters	3	0	0	3
6	Elective	CE	Microgrids and Energy Management	3	0	0	3

Open Electives							
S. No	Category	Sub-Category	Course Title	L	T/D	P/P r	C
1	Elective	OE	Nuclear Power Generation	3	0	0	3
2	Elective	OE	Introduction to Green Energy Technologies	3	0	0	3
3	Elective	OE	Electric Vehicle Engineering	3	0	0	3
4	Elective	OE	Introduction to Electric Vehicles	3	0	0	3

Career Skill Courses							
S. No	Category	Sub-Category	Course Title	L	T/D	P/P r	C
1	Elective	E SEC	Design of Power Electronics Circuits	1	0	2	3
2	Elective	E SEC	Design of Industrial Drives	3	0	0	3

