

**Department of Electronics and Communication
Engineering**

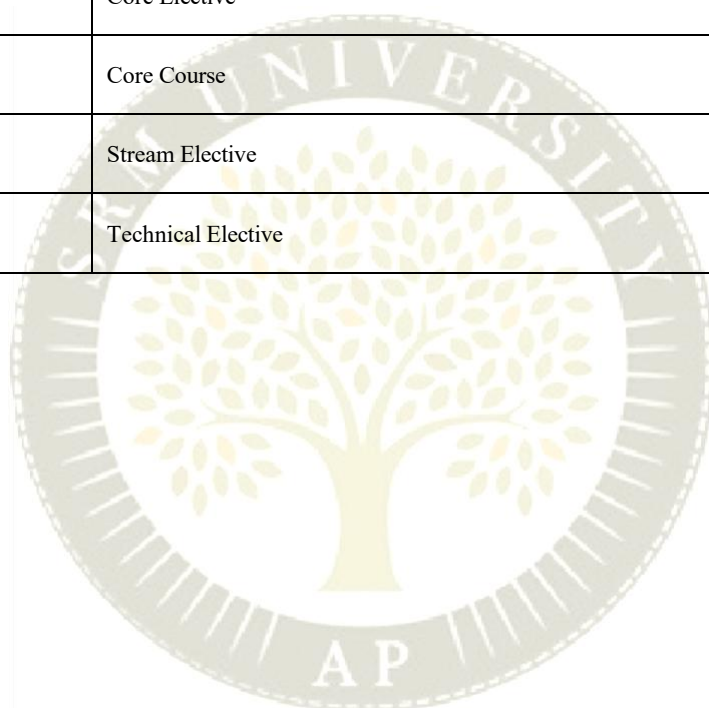
**B.Tech. Electronics and Communication Engineering
Curriculum**

(Applicable to the students admitted from AY: 2024 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/Pr	C
1	AEC	U AEC	Art of Listening, Speaking and Reading Skills	1	0	1	2
2	VAC	U VAC	Universal humanity values and ethics	2	0	0	2
3	SEC	S SEC	Analytical Reasoning and Aptitude Skills 1	1	0	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	SEC	D SEC	Fundamentals of Computing and Programming in C	3	0	1	4
Semester Total				14	0	4	19

SEMESTER - II							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	AEC	U AEC	Effective Writing and Presentation Skills	1	0	1	2
2	VAC	U VAC	Environmental Science	2	0	0	2
3	SEC	S SEC	Entrepreneurial Mindset	2	0	0	2
4	FIC	S FIC	Principles of Economics and Management	2	0	1	3
5	FIC	S FIC	Linear Algebra and Differential Equations	3	0	0	3
6	Core	CC	Fundamentals of Electrical Circuits	3	0	1	4
7	Core	CC	Microelectronic Devices and Circuits	3	0	1	4
Semester Total				16	0	4	20

SEMESTER - III							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	AEC	SAEC	Problem solving 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	Data Structures	3	0	1	4
5	Core	CC	Digital Design with HDL	3	0	1	4
6	Core	CC	Signals and Systems	3	0	1	4
7	Core	CC	Probability and Random Processes	3	0	0	3
8	Core	CC	Design and Analysis of Analog, Mixed Signal Circuits	3	0	1	4
9	Elective	OE	Open Elective / Minor	3	0	0	3
Semester Total				19	0	9	24

SEMESTER - IV							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	AEC	S AEC	Industry Standard Employability skills 1	1	0	1	2
2	VAC	U VAC	Co-Curricular Activities	0	0	2	2*
3	SEC	D SEC	Programming with Python	2	0	1	3
4	Core	CC	Analog communications	3	0	1	4
5	Core	CC	Digital Signal Processing	3	0	1	4
6	Core	CC	Control Systems	2	1	0	3
7	Core	CC	AI/ML for Electronic Engineers	0	0	1	1
8	SEC	D SEC	Coding Skills 1	1	0	1	2
9	Elective	OE	Open Elective / Minor	3	0	0	3
Semester Total				16	1	9	22

SEMESTER - V							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	VAC	U VAC	Co-Curricular Activities	0	0	2	2*
2	SEC	E SEC	Career Skills - I (Core Skills)	1	0	1	2
3	Core	CC	Basic CMOS VLSI Design	3	0	1	4
4	Core	CC	Digital Communication	3	0	1	4
5	Core	CC	Microprocessors and Microcontrollers	3	0	1	4
6	Core	CC	Electromagnetics and Wave propagation	3	0	0	3
7	Core	CC	Internet of Things	2	0	1	3
8	Elective	OE	Open Elective / Minor	3	0	0	3
Semester Total				18	0	7	23

SEMESTER - VI							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	VAC	U VAC	Co-Curricular Activities	0	0	2	2
2	SEC	E SEC	Career Skills - II	1	0	1	2
3	Core	CC	Antenna Design	2	0	1	3
4	Core	CC	Embedded System for Design	3	0	1	4
5	Elective	CE/SE	Core/Specialization Elective	2	0	1	3
6	Elective	CE/SE	Core/Specialization Elective	2	0	1	3
7	Core	CC	DBMS	1	0	1	2
8	SEC	E SEC	Coding Skills II	1	0	1	2
Semester Total				12	0	9	21

SEMESTER - VII							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	Elective	CE/SE	Core/Specialization Elective	2	0	1	3
2	Elective	CE/SE	Core/Specialization Elective	2	0	1	3
3	Elective	CE/SE	Core/Specialization Elective	2	0	1	3
4	RDIP	RDIP	Internship	0	0	4	4
5	Elective	OE	Open Elective / Minor	3	0	0	3
Semester Total				9	0	7	16

SEMESTER – VIII							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	RDIP	RDIP	Major Project	0	0	9	9
2	Elective	OE	Open Elective / Minor	3	0	0	3
Semester Total				3	0	9	12

Specialization: Embedded Systems and IoT							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	Elective	CE/SE	Embedded Programming	2	0	1	3
2	Elective	CE/SE	RTOS	2	0	1	3
3	Elective	CE/SE	Embedded Networking	2	0	1	3
4	Elective	CE/SE	IoT Architecture and Protocols	2	0	1	3
5	Elective	CE/SE	SOC Design for IoT	3	0	0	3
6	Elective	CE/SE	FPGA-based Embedded System Design	2	0	1	3
7	Elective	CE/SE	Embedded Systems for Electric	3	0	0	3

Specialization: VLSI Design							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	Elective	CE/SE	VLSI Physical Design	3	0	0	3
2	Elective	CE/SE	Advanced CMOS Digital IC Design	3	0	0	3
3	Elective	CE/SE	CMOS RFIC Design	3	0	0	3
4	Elective	CE/SE	Design Verification and Testing	3	0	0	3
5	Elective	CE/SE	Nanoelectronics	3	0	0	3
6	Elective	CE/SE	CAD for VLSI IC Design	3	0	0	3
7	Elective	CE/SE	Semiconductor Device Modelling	3	0	0	3

Specialization: Advanced Communication Systems							
S.No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	Elective	CE/SE	Advanced Wireless Communication Systems (5G/6G)	3	0	0	3
2	Elective	CE/SE	Quantum Communications	3	0	0	3
3	Elective	CE/SE	Information Theory and Coding	3	0	0	3
4	Elective	CE/SE	Optical communication	3	0	0	3
5	Elective	CE/SE	Computer Networks and Internet Protocols	3	0	0	3
6	Elective	CE/SE	Detection and Estimation theory	3	0	0	3
7	Elective	CE/SE	Satellite communication	3	0	0	3

Specialization: Advanced Signal Processing with AI/ML							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	Elective	CE/SE	Advanced Signal Processing	3	0	0	3
2	Elective	CE/SE	Deep Learning	2	0	1	3
3	Elective	CE/SE	Image Processing and Computer Vision	3	0	0	3
4	Elective	CE/SE	Biomedical Signal Processing	3	0	0	3
5	Elective	CE/SE	Detection and Estimation Theory	3	0	0	3
6	Elective	CE/SE	Digital Speech Processing	3	0	0	3
7	Elective	CE/SE	Pattern recognition	2	0	1	3

Open Electives							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	Elective	OE	Embedded Programming	3	0	0	3
2	Elective	OE	Computer Network and Internet	3	0	0	3

Carrer Skills							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	SEC	SEC	Data Structures Algorithms	3	0	0	3