

**Department of Electronics and Communication
Engineering**

**B.Tech. Electronics and Communication 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/Pr	C
1	AEC	AEC	Art of Listening, Speaking and Reading Skills	1	0	1	2
2	VAC	VAC	Environmental Science	2	0	0	2
3	SEC	SEC	Analytical Reasoning and Aptitude Skills - I	3	0	0	3
4	FIC	FIC	Engineering Physics	2	0	1	3
5	FIC	FIC	Calculus For Engineers	3	0	0	3
6	FIC	FIC	Fundamentals of Computing and Programming in C	3	0	1	4
7	SEC	D SEC	Industry Standard Employability skills 1	1	0	1	2
Semester Total				15	0	4	19

SEMESTER - II							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	AEC	AEC	Effective Writing and Presentation Skills	1	0	1	2
2	VAC	VAC	Universal Human Values and Ethics	2	0	0	2
3	AEC	AEC	Analytical Reasoning and Aptitude Skills -II	1	0	1	2
4	FIC	FIC	Linear Algebra and Differential Equations	3	0	0	3
5	FIC	FIC	Economics for Engineering	3	0	0	3
6	Core	CC	Fundamentals of Electrical Circuits	3	0	1	4
7	SEC	D SEC	Data structures	1	0	1	2
8	Core	CC	Microelectronic Devices and Circuits	3	0	1	4
9	SEC	D SEC	Industry standard coding for Entrepreneurial Minds 1	1	0	1	2
Semester Total				18	0	6	24

SEMESTER - III							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	AEC	S SEC	Analytical Reasoning and Aptitude Skills III	1	0	1	2
2	VAC	VAC	Co-Curricular Activities	0	0	2	2*
3	SEC	D SEC	Industry standard coding for Entrepreneurial Minds II	1	0	1	2
4	Core	CC	Digital Design with HDL	3	0	1	4
5	Core	CC	Signals and Systems	3	0	1	4
6	Core	CC	Probability and Random Processes	3	0	0	3
7	Core	CC	Design and Analysis of Analog, Mixed Signal Circuits	3	0	1	4
8	OE	OE	Open Elective/Minor	3	0	0	3
Semester Total				17	0	7	22

SEMESTER - IV							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	AEC	S AEC	Industry Standard Employability skills II	1	0	1	2
2	VAC	VAC	Co-Curricular Activities	0	0	2	2*
3	SEC	D SEC	Linear IC Circuits	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	Electro Magnetics and Wave Propagation	3	0	1	4
7	Core	CC	AI/ML for Electronics Engineers	0	0	1	1
8	SEC	D SEC	Industry standard coding for Entrepreneurial Minds III	1	0	1	2
9	OE	OE	Open Elective/Minor	3	0	0	3
Semester Total				16	0	10	23

SEMESTER - V							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	VAC	VAC	Co-Curricular Activities	0	0	2	2*
2	SEC	E SEC	Career Skills - I	2	0	1	3
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	Control Systems	2	1	0	3
7	Core	CC	Internet of Things	1	0	1	2
8	OE	OE	Open Elective/Minor	3	0	0	3
Semester Total				17	1	7	23

SEMESTER - VI							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	VAC	VAC	Co-Curricular Activities	0	0	2	2
2	SEC	E SEC	Career Skills - II	1	0	1	2
3	Core	CC	DBMS	0	0	3	3
4	SEC	E SEC	Industry Standard Employability skills III	1	0	1	2
5	Core	CC	Antenna Design	3	0	1	4
6	Core	CC	Embedded System for Design	3	0	1	4
7	Elective	CE/SE	Core/Specialization Elective	3/2'	0	0/1	3
8	Elective	CE/SE	Core/Specialization Elective	3/2'	0	0/1	3
Semester Total				14	0	9	23

SEMESTER - VII							
S. No	Category	Sub-Category	Course Title	L	T/D	P/Pr	C
1	Elective	CE/SE	Core/Specialization Elective	3/2'	0	0/1	3
2	Elective	CE/SE	Core/Specialization Elective	3/2'	0	0/1	3
3	Elective	CE/SE	Core/Specialization Elective	3/2'	0	0/1	3
4	RDIP	RDIP	Internship	0	0	4	4
5	OE	OE	Open Elective/Minor	3	0	0	3
Semester Total				12	0	04	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	0	0	3	3
Semester Total				0	0	12	12

Specialization: Embedded Systems and IoT							
S.No	Category	Sub-Category	Course Title	L	T/D	P/P r	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	Essentials of SOC Design	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 Vehicles	3	0	0	3

Specialization: VLSI Design							
S. No	Category	Sub-Category	Course Title	L	T/D	P/P r	C
1	Elective	SE	CMOS Analog and mixed signal IC design	2	0	1	3
2	Elective	SE	VLSI Physical Design Automation	3	0	0	3
3	Elective	SE	Advanced CMOS Digital IC Design	3	0	0	3
4	Elective	SE	CMOS RFIC Design	3	0	0	3
5	Elective	SE	Design Verification and Testing	3	0	0	3
6	Elective	SE	Nanoelectronics	3	0	0	3
7	Elective	SE	Architectural design of IC's	3	0	0	3
8	Elective	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	SE	Advanced Wireless Communication Systems(5G/6G)	3	0	0	3
2	Elective	SE	Quantum Communications	3	0	0	3
3	Elective	SE	Information Theory and Coding	3	0	0	3
4	Elective	SE	Optical communication	3	0	0	3
5	Elective	SE	Detection and Estimation theory	3	0	0	3
6	Elective	SE	Satellite communication	3	0	0	3
7	Elective	SE	Computer Networks and Internet Protocols	3	0	0	3

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

Open Electives							
S.No	Category	Sub-Category	Course Title	L	T/D	P/P r	C
1	OE	OE	Drone Fabrication and Testing	3	0	0	3
2	OE	OE	Drone Security	3	0	0	3
3	OE	OE	Hands on with Python and Raspberry PI for Drones	2	0	1	3
4	OE	OE	Internet of Drones	3	0	0	3
5	OE	OE	Embedded System Design for Drones	2	0	1	3