



SSN School of Engineering

**DEPARTMENT OF ELECTRONICS AND
COMMUNICATION ENGINEERING**

**Master of Technology
Wireless Communication Technology**

CURRICULUM

REGULATIONS 2026

Vision of the Department

To be a nationally and globally recognized department in Electronics and Communication Engineering, offering high-quality educational programs at undergraduate, postgraduate, and doctoral levels through research and academic excellence.

Mission of the Department

We will strive towards our Vision by:

- Continued focus on academic and research excellence.
- Empowering students to become reflective professionals through curricular and co-curricular activities that instill a spirit of critical thinking, creativity, innovation, and entrepreneurial skills.
- Building partnerships with leading academic institutions and industries
- Fostering an innovative, and supportive environment that encourages learning, research, and professional growth for students, faculty, and staff.

Programme Educational Objectives (PEOs)

- **PEO1: Professional development:** Graduates will have successful career in communication system design or associated industries or research and higher education, or as entrepreneurs.
- **PEO2: Attitude towards Lifelong-Learning:** Graduates will have the ability and attitude to adapt to the evolving technological challenges.

Programme Outcomes (POs)

At the end of the programme, the graduates will achieve the following attributes:

- **PO1:** An ability to independently carry out research /investigation and development work to solve practical problems.
- **PO2:** An ability to write and present a substantial technical report/document.
- **PO3:** A sound knowledge, and design and analysis ability, in communication engineering.

PEO - PO Mapping

PEO/PO	PO1	PO2	PO3
PEO1	3	3	3
PEO2	2	3	2



COURSE SUMMARY

The listed courses in the curriculum are broadly classified as per the recommendations from the UGC.

Sl. No	Broad Category of Course	Minimum Credit Requirement
1	Department Core Course (DC)	10
2	Major Core Course (MC)	30
3	Multidisciplinary Course (MD)	10
4	Open Elective (OE)	2
5	Project Dissertation (PD)	20
6	Research Internship (RI)	4
5	Skill Enhancement Course (SEC)	4
Total		80

The semester wise credit breakup of the Curriculum based on the above credit breakup proposed by the UGC is as follows:

Semester\Category	DC	MC	MD	OE	PD	RI	SEC	TOTAL
I	7	8	4	2	-	-	2	23
II	3	14	3	-	-	-	2	22
III	-	8	3	-	8	4	-	23
IV	-	-	-	-	12	-	-	12
Total	10	30	10	2	20	4	4	80

SEMESTER I

S. No.	COURSE CODE	COURSE TITLE	COURSE CATEGORY	CONTACT PERIODS	Teaching and Learning Scheme (per semester)					
					L	T	P	TW&SL	TH	C
1		Mathematics for Communication Engineers	MD	4	45	15	0	60	120	4
2		Statistical Signal Processing	DC	5	45	0	30	75	150	4
3		Modulation and Coding	DC	3	45	0	0	45	90	3
4		Antenna Engineering	MC	5	45	0	30	75	150	4
5		Communication System Networks	MC	5	45	0	30	75	150	4
6		Research Methodology / IPR/Operations Research	OE	2	30	0	0	30	60	2
7		Technical Communication	SEC	3	0	15	30	45	90	2
TOTAL				27	255	30	120	405	810	23

SEMESTER II

S. No.	COURSE CODE	COURSE TITLE	COURSE CATEGORY	CONTACT PERIODS	Teaching and Learning Scheme (per semester)					
					L	T	P	TW&SL	TH	C
1		Elective 1	MD	3	45	0	0	45	90	3
2		Array Signal Processing	DC	3	45	0	0	45	90	3
3		RF Circuit Design	MC	5	45	0	30	75	150	4
4		Wireless Communication and Networks	MC	5	45	0	30	75	150	4
5		Elective 2	MC	3	45	0	0	45	90	3
6		Elective 3	MC	3	45	0	0	45	90	3
7		Research Paper Review and Implementation	SEC	3	0	15	30	45	90	2
TOTAL				25	270	15	90	375	750	22

SEMESTER III

S. No.	COURSE CODE	COURSE TITLE	COURSE CATEGORY	CONTACT PERIODS	Teaching and Learning Scheme (per semester)					
					L	T	P	TW&SL	TH	C
1		Multi-disciplinary OPEN Elective	MD	3	45	0	0	45	90	3
2		Elective 4	MC	5	45	0	30	75	150	4
3		Elective 5	MC	5	45	0	30	75	150	4
PRACTICALS										
4		Project/Dissertation Phase I	PD	16	0	0	240	240	480	8
5		Research Internship	RI	04	0	0	60	60	120	2
TOTAL				29	135	0	360	495	990	23

SEMESTER IV

S. No.	COURSE CODE	COURSE TITLE	COURSE CATEGORY	CONTACT PERIODS	Teaching and Learning Scheme (per semester)					
					L	T	P	TW&SL	TH	C
PRACTICALS										
1		Project/Dissertation Phase II	PD	24	0	0	360	360	720	12
TOTAL				24	0	0	360	360	720	12

ELECTIVE 1

S. No.	COURSE CODE	COURSE TITLE	COURSE CATEGORY	CONTACT PERIODS	Teaching and Learning Scheme (per semester)					
					L	T	P	TW&SL	TH	C
1		Optimization Techniques for Wireless Communication	MD	3	45	0	0	45	90	3
2		Deep Learning Techniques	MD	3	45	0	0	45	90	3
3		Wireless Network Security	MD	3	45	0	0	45	90	3

ELECTIVE 2

S. No.	COURSE CODE	COURSE TITLE	COURSE CATEGORY	CONTACT PERIODS	Teaching and Learning Scheme (per semester)					
					L	T	P	TW&SL	TH	C
1		Bio-electromagnetics	MC	3	45	0	0	45	90	3
2		RF energy harvesting and wireless power transfer	MC	3	45	0	0	45	90	3
3		Electromagnetic compatibility	MC	3	45	0	0	45	90	3

ELECTIVE 3

S. No.	COURSE CODE	COURSE TITLE	COURSE CATEGORY	CONTACT PERIODS	Teaching and Learning Scheme (per semester)					
					L	T	P	TW&SL	TH	C
1		Speech Processing	MC	3	45	0	0	45	90	3
2		Machine Vision	MC	3	45	0	0	45	90	3
3		Detection and Estimation Theory	MC	3	45	0	0	45	90	3

ELECTIVE 4

S. No.	COURSE CODE	COURSE TITLE	COURSE CATEGORY	CONTACT PERIODS	Teaching and Learning Scheme (per semester)					
					L	T	P	TW&SL	TH	C
1		Optical Wireless Communication	MC	5	45	0	30	75	150	4
2		Cell free MIMO Communication	MC	5	45	0	30	75	150	4
3		VLSI for Wireless Communication	MC	5	45	0	30	75	150	4

ELECTIVE 5

S. No.	COURSE CODE	COURSE TITLE	COURSE CATEGORY	CONTACT PERIODS	Teaching and Learning Scheme (per semester)					
					L	T	P	TW&SL	TH	C
1		V2X Communication	MC	5	45	0	30	75	150	4
2		Multimedia Compression and Communication	MC	5	45	0	30	75	150	4
3		Quantum Communication	MC	5	45	0	30	75	150	4

MULTI-DISCIPLINARY OPEN ELECTIVE

S. No.	COURSE CODE	COURSE TITLE	COURSE CATEGORY	CONTACT PERIODS	Teaching and Learning Scheme (per semester)					
					L	T	P	TW&SL	TH	C
1		Information Security	MD	3	45	0	0	45	90	3
2		Wireless Body Area Networks	MD	3	45	0	0	45	90	3
3		Multimedia Compression Techniques	MD	3	45	0	0	45	90	3
4		Access Technologies	MD	3	45	0	0	45	90	3
5		Radio over Fiber systems	MD	3	45	0	0	45	90	3

Note: Students from M.Tech. Wireless Communication Technology must not opt for this Open Elective

L - Lecture, T - Tutorial, P - Practical, TW & SL – Term Work & Self Learning, TH – Total Hours and C – Credits