

Government College of Engineering, Karad

SCHEME OF INSTRUCTION & SYLLABI

Programme: Electronics & Telecommunication Engineering

Proposed Scheme of Instructions: Final Year B. Tech. in Electronics & Telecommunication Engineering

Semester – VII (**Mode-1-Academic**) (w.e.f. 2026-27)

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	EXAM SCHEME			
									MSE	ISE	ESE	TOTAL
1	PCC	EX3701	VLSI Design	3	--	--	3	3	20	20	60	100
2	PCC	EX3702	Fiber Optics & Optical Network	3	--	--	3	3	20	20	60	100
3	EL	RM3703	Research Methodology	3	--	--	3	3	20	20	60	100
4	PEC	EX37*4	Industrial /Program Elective -03	2	--	--	2	2	20	20	60	100
5	PEC	EX37*5	Program Elective -04	2	--	--	2	2	20	20	60	100
6	MDM	##	Multi-Disciplinary Minor -05	2	--	--	2	2	20	20	60	100
7	PCC	EX3707	Fiber Optics & Optical Network Lab	--	--	2	2	1	-	25	--	25
8	PCC	EX3708	VLSI Design Lab	--	--	2	2	1	--	25	25	50
9	PEC	EX37*9	Industrial /Program Elective -03 Laboratory	--	--	2	2	1	--	25	--	25
10	EL	EX3710	Major Project	--	--	8	8	4	-	50	50	100
Total				15	0	14	29	22	120	245	435	800

##: - Any course offered from Dept./Inst. Level MDM buckets.

L- Lecture, T-Tutorial, P-Practical, MSE- Mid Semester Examination, ISE- In Semester Evaluation, ESE- End Semester Examination (For Laboratory End Semester performance)



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Course Category	Basic Science Courses (BSC)	Engineering Science Courses (ESC)	Programme Core Course (PCC)	Programme Elective Course (PEC)	Open Elective other than a particular program (OE/MDM)	Vocational and Skill Enhancement Course (VSEC)	Humanities, Social Science, and Management (HSSM)	Experiential Learning (EL)	Co-curricular And Extracurricular Activities (CCA)
Credits	-	-	08	05	02	-	-	7	-
Cumulative Sum	16	16	53	17	20	08	12	10	02

PROGRESSIVE TOTAL CREDITS: 132+22 =154

Note:

- 1: Students must choose either Mode 1 or Mode 2 at the beginning of Semester VII.
- 2: Mode-1 students are permitted to enroll in MOOC courses of Semester VIII during Semester VII with prior approval of the respective Head of Department. The results of these MOOC courses will be considered in Semester VIII.



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Programme: Electronics & Telecommunication Engineering

Proposed Scheme of Instructions: Final Year B. Tech. in Electronics & Telecommunication Engineering

Semester – VII (**Mode-2-Internship**) (w.e.f. 2026-27)

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	EXAM SCHEME			
									MSE	ISE	ESE	TOTAL
1	PEC	EX3711	MOOC – I	-	-	-	--	3	-		100	100
2	PEC	EX3712	MOOC – II	-	-	-	--	3	-		100	100
3	EL	EX3713	Internship	--	--	--	-	12	-	250	250	500
4	MDM	##	Multi-disciplinary Minor – 05	-	--	--	--	2	20	20	60	100
Total				0	0	0	0	20	20	270	510	800

##: - Any course offered from Dept./Inst. Level MDM bucket. L- Lecture, T-Tutorial, P-Practical, MSE- Mid Semester Examination, ISE- In Semester Evaluation, ESE- End Semester Examination (For Laboratory End Semester performance)

Course Category	Basic Science Courses (BSC)	Engineering Science Courses (ESC)	Programme Core Course (PCC)	Programme Elective Course (PEC)	Open Elective other than a particular program (OE/MDM)	Vocational and Skill Enhancement Course (VSEC)	Humanities, Social Science, and Management (HSSM)	Experiential Learning (EL)	Co-curricular And Extracurricular Activities (CCA)
Credits	-	-	00	06	02	-	-	12	-
Cumulative Sum	16	16	45	18	20	08	12	15	02

PROGRESSIVE TOTAL CREDITS: 132+20 =152

Note:

- 1: Students must choose either Mode 1 or Mode 2 at the beginning of Semester VII.
- 2: For MDM 5 Internship mode students, lectures will be conducted online (with the flexibility of sharing recorded lectures) while MSE & ESE evaluation will be in offline mode.



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Programme: Electronics & Telecommunication Engineering

Proposed Scheme of Instructions: Final Year B. Tech. in Electronics & Telecommunication Engineering

Semester – VIII (Mode-2-Academic) (w.e.f. 2026-27)

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	EXAM SCHEME			
									MSE	ISE	ESE	TOTAL
1	PCC	EX3801	VLSI Design	3	--	--	3	3	20	20	60	100
2	PCC	EX3802	Fiber Optics & Optical Network	3	--	--	3	3	20	20	60	100
3	EL	RM3803	Research Methodology	3	--	--	3	3	20	20	60	100
4	PEC	EX38*4	Industrial /Program Elective -03	2	--	--	2	2	20	20	60	100
5	PEC	EX38*5	Program Elective -04	2	--	--	2	2	20	20	60	100
6	MDM	##	Multi-Disciplinary Minor -06	2	--	--	2	2	20	20	60	100
7	PCC	EX3807	Fiber Optics & Optical Network Lab	--	--	2	2	1	-	25	--	25
8	PCC	EX3808	VLSI Design Lab	--	--	2	2	1	--	25	25	50
9	PEC	EX38*9	Industrial /Program Elective -03 Laboratory	--	--	2	2	1	--	25	--	25
10	EL	EX3810	Major Project	--	--	8	8	4	-	50	50	100
			Total	15	0	14	29	22	120	245	435	800

##: - Any course offered from Dept./Inst. Level MDM buckets. L- Lecture, T-Tutorial, P-Practical, MSE- Mid Semester Examination, ISE- In Semester Evaluation, ESE- End Semester Examination (For Laboratory End Semester performance)

Course Category	Basic Science Courses (BSC)	Engineering Science Courses (ESC)	Programme Core Course (PCC)	Programme Elective Course (PEC)	Open Elective other than a particular program (OE/MDM)	Vocational and Skill Enhancement Course (VSEC)	Humanities, Social Science and Management (HSSM)	Experiential Learning (EL)	Co-curricular And Extracurricular Activities (CCA)
Credits	-	-	08	05	02	-	-	07	-
Cumulative Sum	16	16	53	29	22	08	12	22	02

PROGRESSIVE TOTAL CREDITS: 152+22 =174


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Programme: Electronics & Telecommunication Engineering

Proposed Scheme of Instructions: Final Year B. Tech. in Electronics & Telecommunication Engineering

Semester – VIII (**Mode-i-Internship**) (w.e.f. 2026-27)

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	EXAM SCHEME			
									MSE	ISE	ESE	TOTAL
1	PEC	EX3811	MOOC - I	-	-	-		3			100	100
2	PEC	EX3812	MOOC - II	-	-	-		3			100	100
3	EL	EX3813	Internship	--	--	--	-	12	-	250	250	500
4	MDM	##	Multi-disciplinary Minor – 06	--	--	--	--	2	20	20	60	100
Total				0	-	-	0	20	20	270	510	800

:- Any course offered from Dept./Inst. Level MDM buckets. L- Lecture, T-Tutorial, P-Practical, MSE- Mid Semester Examination, ISE- In Semester Evaluation, ESE- End Semester Examination (For Laboratory End Semester performance)

Course Category	Basic Science Courses (BSC)	Engineering Science Courses (ESC)	Programme Core Course (PCC)	Programme Elective Course (PEC)	Open Elective other than particular program (OE/MDM)	Vocational and Skill Enhancement Course (VSEC)	Humanities Social Science and Management (HSSM)	Experiential Learning (EL)	Co-curricular And Extracurricular Activities (CCA)
Credits	-	-	00	06	02	-	-	12	-
Cumulative Sum	16	16	53	24	22	08	12	22	02

PROGRESSIVE TOTAL CREDITS: 154+20 =174

Note:

For MDM 6 Internship mode students, lectures will be conducted online (with the flexibility of sharing recorded lectures), while MSE & ESE evaluations will be in offline mode.



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List of Industrial /Programme Elective Courses:

Specialization on	Electronics & Communication	Robotics & Automation	Signal Processing	Data Science & AI-ML
Elective-I	EX3514: Control System	EX3524: Drives & Control for Automation	EX3534: Digital Speech Processing	EX3544: Machine Learning with Mathematical Foundations
	EX3511: Control System Lab	EX3521: Drives & Control Laboratory	EX3531: Digital Speech Processing Laboratory	EX3541: Python Programming for Machine Learning
Elective-II	EX3614: Information Theory & Coding	EX3624: Programmable Logic Controllers (PLCs)	EX3634: Digital Image & Video Processing	EX3644: Neural Networks and Deep Learning
	EX3611: Information Theory & Coding Laboratory	EX3621: Programmable Logic Controller Laboratory	EX3631: Digital Image& Video Processing Laboratory	EX3641: Neural Networks and Deep Learning Laboratory
Elective-III	EX3714/EX3814: Satellite Communication	EX3734/EX3834: Industrial Robotics	EX3744/EX3844: Computer Vision with Machine Learning	EX3754/EX3854: Generative AI (Industrial Elective)
	EX3719/EX3819: Satellite Communication Lab	EX3739/EX3839: Industrial Robotics lab	EX3749/EX3849: Computer Vision with Machine Learning lab	EX3759/EX3859: Generative AI lab(Industrial Elective Lab)
	EX3724/EX3824: Microwave & Antenna Engineering			
	EX3729/EX3829: Microwave & Antenna Engineering Laboratory			
Elective-IV	EX3715/EX3815: Wireless & Mobile Communication	EX3735/EX3835: Mobile Robot	EX3745/EX3845: Biomedical Signal Processing	EX3755/EX3855: Agentic AI
	EX3725/EX3825: Wireless Sensor Network			



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Specialization on	Software Testing	Cloud Computing & Cyber Security	Embedded and RTOS	Semiconductor IC Design
Elective-I	EX3554: Manual Testing	EX 3564: Cloud Computing Foundation	EX3574: Advanced Embedded C Programming	EX3584: Digital CMOS Circuit Design
	EX3551: Manual Testing Laboratory	EX3561: Cloud Computing Foundation Laboratory	EX3571: Advanced Embedded C Programming Laboratory	EX3581: Digital CMOS Circuit Design Lab
Elective-II	EX3654: API Testing	EX3664: Cloud Infrastructure Management and Automation	EX3674: Embedded System Design with ARM Processors	EX3684: CMOS Analog and Mixed Circuit Design
	EX3651: API Testing Laboratory	EX3661: Cloud Infrastructure Management and Automation Laboratory	EX3671: Embedded System Design with ARM Processors Lab	EX3681: CMOS Analog and Mixed Circuit Design Lab
Elective-III	EX3764/EX3864: Java Programming for Automation Testing	EX3774/EX3874: Cloud Application Development and Deployment	EX3784/EX3884: Automotive and Industrial Embedded System	EX3794/EX3894: FPGA-Based Design Using System VERILOG
	EX3769/EX3869: Java Programming for Automation Testing Lab	EX3779/EX3879: Cloud Application Development and Deployment lab	EX3789/EX3889: Automotive and Industrial Embedded System Lab	EX3799/EX3899: FPGA-Based Design Using System VERILOG Lab
Elective-IV	EX3765/EX3865: Selenium for Automation Testing	EX3775/EX3875: Cyber Security	EX3785/EX3885: Security in Embedded system	EX3795/ EX3895: Physical IC Design


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