Government College of Engineering, Karad

SCHEME OF INSTRUCTION & SYLLABI

Program: Electronics and Telecommunication Engineering

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

Semester – VII(w.e.f. 2024-25)

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	CT-1	CT-2	TA/CA	ESE	TOTAL
1	OEC	EX2701	Data and Network Security	3	-	-	3	3	15	15	10	60	100
2	PCC	EX2702	Image and video processing	3	-	-	3	3	15	15	10	60	100
3	PCC	EX2703	Fiber Optics &Optical Networks	2	-	-	2	2	15	15	10	60	100
4	PCC	EX2704	Machine Learning	3	-	-	3	3	15	15	10	60	100
5	PEC	EX27*5	Elective – III	2	1	-	3	3	15	15	10	60	100
6	PEC	EX27*6	Elective – IV	2	1	-	3	3	15	15	10	60	100
7	PCC	EX2707	Image and video processing lab	-	-	2	2	1	-	-	25	25	50
8	PCC	EX2708	Fiber Optics &Optical Networks Lab	-	-	2	2	1	-	-	25	25	50
9	P/S/IT	EX2709	Industrial Training	-	-	2	2	1	15	15	-	20	50
10	P/S/IT	EX2710	Project Work Phase 1			2	2	1	15	15	-	20	50
11	Audit	EX2711	Machine Learning Lab	-	-	2	2	Audit	-	-	-	-	-
12	Audit	EX27*2	Audit Course Lab- I	-	-	4	4	Audit	-	-	-	-	-
			Total	15	02	14	31	21	120	120	110	450	800

L-Lecture   T-Tutorial   P-Practical   CT1- ClassTest1   TA/CA- Teacher Assessment/Continuous Assessment CT2- ClassTest2

ESE- End Semester Examination (For Laboratory End Semester performance)

Course Category	HSMC (Hum., Soc. Sc, Mgmt.)	BSC (Basic Sc.)	ESC (Engg. Sc.)	PCC (Programme Core courses)	PEC (Programme Elective courses)	OEC (Open Elective courses fromother discipline)	MCC (Mandatory Courses)	Project / Seminar / Industrial Training
Credits	--	--	--	10	06	03	Yes	02
Cumulative Sum	9	21	28	51	12	15	Yes	05

PROGRESSIVE TOTAL CREDITS : 120+21 = 141

Government College of Engineering, Karad

SCHEME OF INSTRUCTION & SYLLABI

Program: Electronics and Telecommunication Engineering

Scheme of Instructions: Final Year B. Tech. in Electronics and Telecommunication Engineering (ACADEMIC MODE)

Semester – VIII(w.e.f. 2024-25)

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	CT-1	CT-2	TA/CA	ESE	TOTAL
									EXAM SCHEME				
1	HSMC	EX2801	Legal regulatory and compliance	3	-	-	3	3	15	15	10	60	100
2	OEC	EX2802	Robotics	3	1	-	4	4	15	15	10	60	100
3	PEC	EX28*3	Elective – V	2	1	-	3	3	15	15	10	60	100
4	OEC	EX2804	Robotics Lab	-	-	2	2	1	-	-	50	50	100
5	P/S/IT	EX2805	Project Work Phase 2	-	-	16	16	8	50	50	100	100	300
6	Audit	EX28*6	**Audit Course Lab- II**	-	-	4	4	Audit	-	-	-	-	-
			Total	08	02	22	32	19	95	95	180	330	700

L-Lecture   T-Tutorial   P-Practical

CT1- ClassTest1   TA/CA- Teacher Assessment/Continuous Assessment

CT2- ClassTest2   ESE- End Semester Examination (For Laboratory End Semester performance)

Course Category	HSMC (Hum., Soc. Sc, Mgmt.)	BSC (Basic Sc.)	ESC (Engg. Sc.)	PCC (Programme Core courses)	PEC (Programme Elective courses)	OEC (Open Elective courses fromother discipline)	MCC (Mandatory Courses)	Project / Seminar / Industrial Training
Credits	03	--	--	---	03	05	--	08
Cumulative Sum	12	21	28	51	15	20	Yes	13

PROGRESSIVE TOTAL CREDITS : 141+19= 160

SCHEME OF INSTRUCTION & SYLLABI

Program: Electronics and Telecommunication Engineering

Scheme of Instructions : Final Year B. Tech. in Electronics and Telecommunication Engineering (INDUSTRY MODE)

Semester – VIII(w.e.f. 2024-25)

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Course Credits	EXAM SCHEME				
									CT-1	CT-2	TA/CA	ESE	TOTAL
1	MOOC	EX2807	Legal regulatory and compliance (MOOC – 1)	-	-	-	-	3				100	100
2	MOOC	EX2808	(MOOC – 2)	-	-	-	-	4	-	-	-	100	100
3	MOOC	EX2809	(MOOC – 3)	-	-	-	-	4	-	-	-	100	100
4	P/S/IT	EX2810	Project Work Phase 2	-	-	-	-	8	50	50	100	200	400
			Total	**-**	**-**	**-**	**-**	**19**	**50**	**50**	**100**	**500**	**700**

L-Lecture   T-Tutorial   P-Practical

CT1- ClassTest1   TA/CA- Teacher Assessment/Continuous Assessment

CT2- ClassTest2   ESE- End Semester Examination (For Laboratory End Semester Performance)

Course Category	HSMC (Hum., Soc. Sc, Mgmt.)	BSC (Basic Sc.)	ESC (Engg. Sc.)	PCC (Programme Core courses)	MOOCS	OEC (Open Elective courses fromother discipline)	MCC (Mandatory Courses)	Project / Seminar / Industrial Training
Credits	03	--	--	---	08	--	--	08
Cumulative Sum	12	21	28	51	20	15	Yes	13

PROGRESSIVE TOTAL CREDITS : 141+19= 160

Program Elective Courses:

Specialization	Elective III	Elective IV	Elective V
	7ᵗʰ Semester	**7ᵗʰ Semester**	**8ᵗʰ Semester**
Signal processing and communication	Multirate Signal Processing and Wavelet	Speech Processing	DSP Processor Architectureand Algorithms
Data science	Soft computing	Big data and data Mining	Cloud Computing
VLSI and Embedded	Mixed signal IC Designing	RF IC Designing	Real Time System Design and Applications
Automation	Automotive Electronics	Medical Electronics	1. Agro Instrumentation OR 2. Computer Vision
Communication	4G/5G communication Technology	Radar Engineering	Cyber Security

COMMON INSTRUCTIONs:

Departments shall suggest& execute

MOOCs for students adapting *Industry Mode* to fulfil the credit requirements. Copy of certificates / grade card shall be submitted to Controller ofExaminations, GCE Karad through Program Coordinator prior to ESE.

Semester VII

Sr.No	Course Category	Course Code	Elective III
1	PEC	EX2715	Multirate Signal Processing and Wavelet
2	PEC	EX2725	Soft computing
3	PEC	EX2735	Mixed signal IC Designing
4	PEC	EX2745	Automotive Electronics
5	PEC	EX2755	4G/5G communication Technology

Semester VII

Sr.No	Course Category	Course Code	Elective IV
1	PEC	EX2716	Speech Processing
2	PEC	EX2726	Big data and data Mining
3	PEC	EX2736	RF IC Designing
4	PEC	EX2746	Medical Electronics
5	PEC	EX2756	Radar Engineering

Semester VIII

Sr.No	Course Category	Course Code	Elective V
1	PEC	EX2813	DSP Processor Architecture and Algorithms
2	PEC	EX2823	Cloud Computing
3	PEC	EX2833	Real Time System Design and Applications
4	PEC	EX2843	Agro Instrumentation
5	PEC	EX2853	Cyber Security
6	PEC	EX2863	Computer Vision

Audit Course Lab:

	Audit Course Lab I	Audit Course Lab II
AIMLDS	**EX2712**: Foundations of Data Science and Machine Learning Lab	**EX2816:** Advanced AI Techniques and Applications Lab
AIOT	**EX2722:** AIoT Development Lab	**EX2826:** Advance AI and IoT Integration Lab
ARVR	**EX2732:** Immersive Game Development Lab	**EX2836:**Advanced ARVR Techniques and Applications Lab
SAP ERP	**EX2742:**ABAP Programming for SAP HANA Lab	**EX2846:**ABAP programming in Eclipse LAB
Electric vehicle Mechanical Perspective	**EX2752:** EV design and 3D Modeling lab	**EX2856: :** EV design analysis and Simulation Lab
Electric vehicle Electrical Perspective	**EX2762**: : Foundation of Electrical Vehicle Lab	**EX2866:**Advanced Electrical Vehicle Lab
Image Processing	**EX2772:**Fundamentals of Image Processing Lab	**EX2876:**Advanced Image Processing Lab