

Government College of Engineering, Karad
(An Autonomous Institute of Government of Maharashtra)

Programme: Electrical Engineering

Structure for second year to fourth year of B. Tech
(Revised from A.Y.: 2017-18)

Government College of Engineering, Karad

(An Autonomous Institute of Government of Maharashtra)

B. Tech. Second year - Electrical Engineering

Curriculum Structure (w.e.f. 2017-18)

Semester - III

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs/Wk	Credits	EXAM SCHEME				
									CT1	CT2	TA/CA	ESE	TOTAL
1	BS	EE301	Engineering Mathematics -III	4	1	-	5	5	15	15	10	60	100
2	PC	EE302	Basic Circuit Theory	3	2	-	5	5	15	15	10	60	100
3	PC	EE303	Industrial Management and Economics	3	-	-	3	3	15	15	10	60	100
4	ES	EE304	Signals and Systems	4	1	-	5	5	15	15	10	60	100
5	PC	EE305	Electronic Devices and Circuits	4	-	-	4	4	15	15	10	60	100
6	PC	EE306	Basic Circuit Theory Lab	-	-	2	2	1	-	-	50	50*	100
7	PC	EE307	Electronic Devices and Circuits Lab	-	-	2	2	1	-	-	50	50*	100
8	MC	MC301	Environmental Studies	3	-	-	3	0(Audit)	15	15	10	60	100
			Total	21	4	4	29	24	90	90	160	460	800

CT1- Class Test 1 TA/CA- Teacher Assessment/Continuous Assessment

CT2- Class Test 2 ESE- End Semester Examination (For Laboratory: End Semester Performance)* ESE in performance based practical examination

Credits distribution

Course Category	HS (Hum. and So. Sci)	BS (Basic Sc.)	ES (Eng. Sc.)	PC (Programme Core)	PE (Programme Electives)	OE (Open Elective)	MC (Mandatory Course)
Credits	-	5	5	14	-	-	-
Cumulative Sum	3	22	33	14	-	-	-

Government College of Engineering, Karad

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B. Tech. Second year - Electrical Engineering

Curriculum Structure (w.e.f. 2017-18)

Semester - IV

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs./Wk	Credits	EXAM SCHEME				
									CT1	CT2	TA/CA	ESE	TOTAL
1	BS	EE401	Engineering Mathematics- IV	3	1	-	4	4	15	15	10	60	100
2	PC	EE402	Electrical Measurements and Instrumentation	3	-	-	3	3	15	15	10	60	100
3	PC	EE403	Electrical Machines -I	3	-	-	3	3	15	15	10	60	100
4	PC	EE404	Digital Electronics	3	-	-	3	3	15	15	10	60	100
5	PC	EE405	Power System -I	3	-	-	3	3	15	15	10	60	100
6	PC	EE406	Electrical Measurements and Instrumentation -Lab	-	-	2	2	1	-	-	25	25*	50
7	PC	EE407	Electrical Machines –I Lab	-	-	2	2	1	-	-	25	25*	50
8	PC	EE408	Digital Electronics Lab	-	-	2	2	1	-	-	25	25*	50
9	PC	EE409	Power System –I Lab	-	-	2	2	1	-	-	50	-	50
10	ES	EE410	Scilab Lab	-	-	2	2	1	-	-	50	-	50
11	HS	HS002	General Proficiency- II	2	-	2	4	3	-	-	50	-	50
			Total	17	1	12	30	24	75	75	275	375	800

CT1- Class Test 1

TA/CA- Teacher Assessment/Continuous Assessment

CT2- Class Test 2

ESE- End Semester Examination (For Laboratory: End Semester Performance)

* ESE in performance based practical examination

Credits distribution

Course Category	HS (Hum. and So. Sci)	BS (Basic Sc.)	ES (Eng. Sc.)	PC (Programme Core)	PE (Programme Electives)	OE (Open Elective)	MC (Mandatory Course)
Credits	3	4	1	16	-	-	-
Cumulative Sum	6	26	34	30	-	-	-

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B. Tech. Third year - Electrical Engineering

Curriculum Structure (w.e.f. 2017-18)

Semester - V

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs./Wk	Credits	EXAM SCHEME				
									CT1	CT2	TA/CA	ESE	TOTAL
1	PC	EE501	Electromagnetics	3	1	-	4	4	15	15	10	60	100
2	PC	EE502	Power System –II	4	-	-	4	4	15	15	10	60	100
3	PC	EE503	Control System - I	3	-	-	3	3	15	15	10	60	100
4	PC	EE504	Electrical Machines-II	3	2	-	5	5	15	15	10	60	100
5	PC	EE505	Computational Techniques	3	-	-	3	3	15	15	10	60	100
6	PC	EE506	Control System –I Lab	-	-	2	2	1	-	-	50	50*	100
7	PC	EE507	Electrical Machines-II Lab	-	-	2	2	1	-	-	50	50*	100
8	PC	EE508	Computational Techniques Lab	-	-	2	2	1	-	-	25	25*	50
9	HS	HS003	General Proficiency-III	2	-	2	4	3	-	-	50	-	50
			Total	18	3	8	29	25	75	75	225	425	800

CT1- Class Test 1

TA/CA- Teacher Assessment/Continuous Assessment

CT2- Class Test 2

ESE- End Semester Examination (For Laboratory: End Semester Performance)

* ESE on performance based practical examination

Credits distribution

Course Category	HS (Hum. and So. Sci)	BS (Basic Sc.)	ES (Eng. Sc.)	PC (Programme Core)	PE (Programme Electives)	OE (Open Elective)	MC (Mandatory Course)
Credits	3	-	-	22	-	-	-
Cumulative Sum	9	26	34	52	-	-	-

Government College of Engineering, Karad

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B. Tech. Third year - Electrical Engineering

Curriculum Structure (w.e.f. 2017-18)

Semester - VI

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs./Wk	Credits	EXAM SCHEME				
									CT1	CT2	TA/CA	ESE	TOTAL
1	OE	OE631	Open Elective	2	-	2	4	3	-	-	50	50*	100
2	PC	EE602	Optimization Techniques	3	-	-	3	3	15	15	10	60	100
3	PC	EE603	Power Electronics	4	1	-	5	5	15	15	10	60	100
4	PC	EE604	Control System –II	4	2	-	6	6	15	15	10	60	100
5	PC	EE605	Communication Engineering	3	-	-	3	3	15	15	10	60	100
6	PC	EE606	Power Electronics Lab	-	-	2	2	1	-	-	25	50*	75
7	PC	EE607	Control System-II Lab	-	-	2	2	1	-	-	25	50*	75
8	PC	EE608	Communication Engineering Lab	-	-	2	2	1	-	-	50	-	50
9	PC	EE609	Minor Project	-	-	2	2	2	-	-	50	50	100
			Total	16	3	10	29	25	60	60	240	440	800

Every Student will undergo Industrial Training of Two weeks in summer vacation after B. Tech. VI Sem. Examinations.

CT1- Class Test 1 TA/CA- Teacher Assessment/Continuous Assessment

CT2- Class Test 2 ESE- End Semester Examination (For Laboratory: End Semester Performance)

* ESE in performance based practical examination

Credits distribution

Course Category	HS (Hum. and So. Sci)	BS (Basic Sc.)	ES (Eng. Sc.)	PC (Programme Core)	PE (Programme Electives)	OE (Open Elective)	MC (Mandatory Course)
Credits	-	-	-	22	-	3	-
Cumulative Sum	9	26	34	74	-	3	-

Government College of Engineering, Karad

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B. Tech. Fourth year - Electrical Engineering

Curriculum Structure (w.e.f. 2017-18)

Semester - VII

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs./Wk	Credits	EXAM SCHEME				
									CT1	CT2	TA/CA	ESE	TOTAL
1	PC	EE701	Power Electronics Applications	3	2	-	5	5	15	15	10	60	100
2	PC	EE702	Switchgear and Protection	3	1	-	4	4	15	15	10	60	100
3	PC	EE703	Microcontrollers	3	-	-	3	3	15	15	10	60	100
4	PE	EE704	Elective-I	3	1	-	4	4	15	15	10	60	100
5	PC	EE705	Power Electronics Applications Lab	-	-	2	2	1	-	-	50	50*	100
6	PC	EE706	Switchgear and Protection Lab	-	-	2	2	1	-	-	50	25	75
7	PC	EE707	Microcontrollers Lab	-	-	2	2	1	-	-	50	25*	75
8	PC	EE708	Project - I	-	-	2	2	4	-	-	50	50	100
9	PC	EE709	Seminar	-	-	1	1	1	-	-	25	-	25
10	PC	EE710	Industrial Training Presentation	-	-	1	1	2	-	-	25	-	25
			Total	12	4	10	26	26	60	60	290	390	800

There will be two presentations, first will be based on Industrial training and another on seminar topic to be selected in consultation with guide.

CT1- Class Test 1 TA/CA- Teacher Assessment/Continuous Assessment

CT2- Class Test 2 ESE- End Semester Examination (For Laboratory: End Semester Performance)* ESE in performance based practical examination

Credits distribution

Course Category	HS (Hum. and So. Sci)	BS (Basic Sc.)	ES (Eng. Sc.)	PC (Programme Core)	PE (Programme Electives)	OE (Open Elective)	MC (Mandatory Course)
Credits	-	-	-	22	4	-	-
Cumulative Sum	9	26	34	96	4	3	-

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B. Tech. Fourth year - Electrical Engineering

Curriculum Structure (w.e.f. 2017-18)

Semester - VIII

Sr. No.	Course Category	Course Code	Course Title	L	T	P	Contact Hrs./Wk	Credits	EXAM SCHEME				
									CT1	CT2	TA/CA	ESE	TOTAL
1	PC	EE801	Electrical Utilization and Traction	3	2	-	5	5	15	15	10	60	100
2	PC	EE802	Computer aided Design of Electrical Machines	3	2	-	5	5	15	15	10	60	100
3	PE	EE803*	Elective-II	3	-	-	3	3	15	15	10	60	100
4	PE	EE804*	Elective-III	3	-	-	3	3	15	15	10	60	100
5	PC	EE805	Computer aided Design of Electrical Machines Lab	-	-	4	4	2	-	-	50	50	100
6	PC	EE806	Project –II	-	-	6	6	8	-	-	100	200	300
			Total	12	4	10	26	26	60	60	190	490	800

*Elective II and Elective III list is provided at the end of structure

CT1- Class Test 1

TA/CA- Teacher Assessment/Continuous Assessment

CT2- Class Test 2

ESE- End Semester Examination (For Laboratory: End Semester Performance)

Credits distribution

Course Category	HS (Hum. and So. Sci)	BS (Basic Sc.)	ES (Eng. Sc.)	PC (Programme Core)	PE (Programme Electives)	OE (Open Elective)	MC (Mandatory Course)
Credits	-	-	-	20	6	-	-
Cumulative Sum	9	26	34	116	10	3	-

Government College of Engineering, Karad

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Program: Electrical Engineering

List of Electives offered by Electrical Engineering Department

Open Elective	Elective I	Elective II	Elective III
Semester VI	Semester VII	Semester VIII	Semester VIII
OE631 Industrial Electrical Systems	EE714 High Voltage DC Transmission (HVDC)	EE813 Extra High Voltage AC Transmission (EHVAC)	EE814 Restricted Power System
	EE724 FACTS (Flexible AC Transmissions)	EE823 Wind & Solar Power	EE824 Power Plant Engineering
	EE734 Digital Signal Processing (DSP)	EE833 Robotics & Automation	EE834 Neural Network
	EE744 Fuzzy Logic	EE843 Sliding Mode Control	EE844 Electrical Engineering Materials
	EE754 Power System Operation & Control	EE853 Special Electrical Machines	EE854 Electrical Estimation and Costing