Government College of Engineering, Karad.

(An Autonomous Institute of Government of Maharashtra)

Programme: Civil Engineering

Structure for second year to fourth year of B. Tech
(w.e.f Academic Year 2018-19)

Government College of Engineering, Karad

(An Autonomous Institute of Government of Maharashtra)

B. Tech. Second year - Civil Engineering

Curriculum Structure

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	CE301	Engineering Mathematics III	4	1	-	5	5	15	15	10	60	100
2	PC	CE302	Strength of Materials	3	1	-	4	4	15	15	10	60	100
3	PC	CE303	Building Construction & Technology	3	1	-	4	4	15	15	10	60	100
4	PC	CE304	Fluid Mechanics-I	4	-	-	4	4	15	15	10	60	100
5	PC	CE305	Surveying-I	3	1	-	4	4	15	15	10	60	100
6	PC	CE306	Surveying-I Lab	-	-	2	2	1	-	-	50	50	100
7	PC	CE307	Strength of Materials Lab	-	-	2	2	1	-	-	25	25	50
8	PC	CE308	Fluid Mechanics-I Lab	-	-	2	2	1	-	-	25	25	50
9	MC	CC301	Environmental Studies	3	-	-	3	0 (Audit)	15	15	10	60	100
			Total	20	04	06	30	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)

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	-	19	-	-	-
Cumulative Sum	3	22	28	19	-	-	-

Government College of Engineering, Karad

(An Autonomous Institute of Government of Maharashtra)

B. Tech. Second year - Civil Engineering

Curriculum Structure

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	PC	CE401	Concrete Technology	3	-	-	3	3	15	15	10	60	100
2	PC	CE402	Surveying-II	3	-	-	3	3	15	15	10	60	100
3	PC	CE403	Geotechnical Engineering	3	-	-	3	3	15	15	10	60	100
4	PC	CE404	Engineering Geology	4	-	-	4	4	15	15	10	60	100
5	PC	CE405	Fluid Mechanics - II	3	-	-	3	3	15	15	10	60	100
6	PC	CE406	Surveying-II Lab	-	-	2	2	1	-	-	25	25	50
7	PC	CE407	Engineering Geology Lab.	-	-	2	2	1	-	-	50	-	50
8	PC	CE408	Concrete Technology Lab.	-	-	2	2	1	-	-	25	25	50
9	PC	CE409	Fluid Mechanics - II Lab	-	-	2	2	1	-	-	50	-	50
10	PC	CE410	Geotechnical Engineering Lab	-	-	2	2	1	-	-	25	25	50
11	HS	HS002	General Proficiency II	2	-	2	4	3	-	-	50	-	50
			Total	18	00	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)

Credits Distribution

Course Category	HS (Hum. And So. Sic)	BS (Basic Sc.)	ES (Eng. Sc.)	PC (Programme Core)	PE(Programme Electives)	OE (Open Elective)	MC (Mandatory Course)
Credits	3	-	-	21	-	-	-
Cumulative Sum	6	22	28	40	-	-	-

Government College of Engineering, Karad

(An Autonomous Institute of Government of Maharashtra)

B. Tech. Third year - Civil Engineering

Curriculum Structure

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	CE501	Design of Steel Structures	3	-	-	3	3	15	15	10	60	100
2	PC	CE502	Town Planning &Transportation Engineering	3	-	-	3	3	15	15	10	60	100
3	PC	CE503	Analysis of Determinate Structures	3	1	-	4	4	15	15	10	60	100
4	PC	CE504	Water Supply Engineering	3	-	-	3	3	15	15	10	60	100
5	PC	CE505	Engineering Hydrology	3	-	-	3	3	15	15	10	60	100
6	PC	CE506	Transportation Engineering Lab	-	-	2	2	1	-	-	25	25	50
7	PC	CE507	Building Planning and Design Studio	-	-	4	4	4	-	-	50	50	100
8	PC	CE508	Computer Aided Drawing Lab	-	-	2	2	1	-	-	50	50	100
9	HS	HS003	General Proficiency III	2		2	4	3	-	-	50	-	50
			Total	17	01	10	28	25	75	75	200	400	800

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 Sic)	BS (Basic Sc.)	ES (Eng. Sc.)	PC (Programme Core)	PE (Programme Electives)	OE (Open Elective)	MC (Mandatory Course)
Credits	3	-	-	22	-	-	-
Cumulative Sum	9	22	28	62	-	-	-

Government College of Engineering, Karad

(An Autonomous Institute of Government of Maharashtra)

B. Tech. Third year - Civil Engineering

Curriculum Structure

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	OE611	Open Elective	2	-	2	4	3	-	-	50	50	100
2	PC	CE602	Analysis of Indeterminate Structures	3	1	-	4	4	15	15	10	60	100
3	PC	CE603	Water Resources Engineering	4	-	-	4	4	15	15	10	60	100
4	PC	CE604	Transportation Engineering	3	-	-	3	3	15	15	10	60	100
5	PC	CE605	Wastewater Engineering and Pollution	3	-	-	3	3	15	15	10	60	100
6	PC	CE606	Foundation Engineering	3	-	-	3	3	15	15	10	60	100
7	PC	CE607	Design & Drawing of Steel Structures	-	-	4	4	2	-	-	25	25	50
8	PC	CE608	Environmental Engineering Lab	-	-	2	2	1	-	-	50	-	50
9	PC	CE609	Minor Project	-	-	2	2	2	-	-	50	50	100
			Total	18	01	10	29	25	75	75	225	425	800

 # Every Student will undergo Industrial Training of Two weeks (Minimum) 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)

Credits Distribution

Course Category	HS (Hum. And So. Sic)	BS (Basic Sc.)	ES (Eng. Sc.)	PC (Programme Core)	PE(Programme Electives)	OE (Open Elective)	MC (Mandatory Course)
Credits	-	-	-	22	-	3	-
Cumulative Sum	9	22	28	84	-	3	-

Government College of Engineering, Karad

(An Autonomous Institute of Government of Maharashtra)

B. Tech. Fourth year - Civil Engineering

Curriculum Structure - 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	CE701	Quantity Surveying & Valuation	3	-	-	3	3	15	15	10	60	100
2	PC	CE702	Construction Planning and Management	3	-	-	3	3	15	15	10	60	100
3	PC	CE703	Structural Dynamics and Earthquake Engineering	3	-	-	3	3	15	15	10	60	100
4	PC	CE 704	Limit State Design of Concrete Structures	3	1	-	4	4	15	15	10	60	100
5	PE	CE 7*5	Elective I	4	1	-	4	4	15	15	10	60	100
6	PC	CE 706	Quantity Surveying & Valuation Lab	-	-	2	2	1	-	-	25	25	50
7	PC	CE707	Limit State Design of Concrete Structures Lab	-	-	2	3	1	-	-	25	25	50
8	PC	CE708	Seminar	1	-		1	1	-	-	50	-	50
9	PC	CE709	Project Phase – I	-	-	2	2	4	-	-	50	50	100
10	PC	CE710	Industrial Training Presentation	-	-	1	1	2			50		50
			Total	17	2	07	26	26	75	75	250	400	800

*Elective- I list is provided at the end of the structure

 # SEMINAR: There will be two presentations, first will be based on Industrial training and another on 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)

Credits Distribution

Course Category	HS (Hum. And So. Sic)	BS (Basic Sc.)	ES (Eng. Sc.)	PC (Programme Core)	PE(Programme Electives)	OE (Open Elective)	MC (Mandatory Course)
Credits	-	-	-	22	4	-	-
Cumulative Sum	9	22	28	106	4	3	-

Government College of Engineering, Karad

(An Autonomous Institute of Government of Maharashtra)

B. Tech. Fourth year - Civil Engineering

Curriculum Structure

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	CE801	Design of Concrete Structure	4	-	--	4	4	15	15	10	60	100
2	PE	CE8*2	Elective II	4	-	-	4	4	15	15	10	60	100
3	PE	CE8*3	Elective III	4	-	-	4	4	15	15	10	60	100
4	PC	CE804	Construction Equipment and Techniques	3	-	-	3	3	15	15	10	60	100
5	PE	CE8*5	Elective II Lab	-	-	2	2	1	-	-	50	50	100
6	PC	CE806	Design & Drawing of RC Structures	-	-	4	4	2	-	-	50	50	100
7	PC	CE807	Project Phase II	-	-	5	5	8	-	-	100	100	200
			Total	15	00	11	26	26	60	60	240	440	800

*Elective- II and Elective III list is provided at the end of the 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. Sic)	BS (Basic Sc.)	ES (Eng. Sc.)	PC (Programme Core)	PE(Programme Electives)	OE (Open Elective)	MC (Mandatory Course)
Credits				17	9		
Cumulative Sum	9	22	28	123	13	3	0

Government College of Engineering, Karad

(An Autonomous Institute of Government of Maharashtra)

Programme: Civil Engineering

List of Elective offered by Civil Engineering Department

Open Elective	Elective-I	Elective-II	Elective- II Lab	Elective-III
Semester – VI	**Semester - VII**	**Semester - VIII**	**Semester - VIII**	**Semester - VIII**
OE611 Building Services	**CE715** Advanced Structural Analysis	**CE812** Advanced Design of Concrete Structure	**CE815** Advanced Design of Concrete Structure Lab	**CE813** Repairs & Rehabilitation of Structures
	CE725 Hydraulic Structures	**CE822** Channel and River Hydraulics	**CE825** Channel and River Hydraulics Lab	**CE823** Water Distribution Systems
	CE735 Advanced Foundation Design	**CE832** Pre-Stressed Concrete Design	**CE835** Pre-Stressed Concrete Design Lab	**CE833** Rock Mechanics
	CE745 Remote Sensing	**CE842** Advanced Engineering Geology	**CE845** Advanced Engineering Geology Lab	**CE843** Advanced Construction Techniques
	CE755 Traffic Engineering	**CE852** Pavement Design	**CE855** Pavement Design Lab	**CE853** Legal Aspects in Civil Engineering
	CE765 Advanced Water Treatment	**CE862** Industrial Wastewater Treatment	**CE865** Industrial Wastewater Treatment Lab	**CE863** Solid Waste Management
	CE775 Finite Element Method	**CE872** Bridge Engineering	**CE875** Bridge Engineering Lab	**CE873** Ground Improvement Techniques
	CE785 Hydropower Engineering	**CE882** Watershed Development and Management	**CE885** Watershed Development and Management Lab	

Note: -Maximum number of students should be 30 or 50% of class strength, whichever is greater. Also, minimum number of students shall be 15 to offer any elective.

Self-study:

Self study is study of something by the student himself/herself through books, reports, online resources, etc. without direct supervision of a teacher. It is a way of studying and figuring out things by one's own efforts. In the autonomous syllabus, it is proposed to incorporate this technique and the guidelines for implementing the same are asss under.

1. The subject teacher should identify a part of a unit of the syllabus and distribute the same amongst individual students or groups of students as self study material.

2 The students will present the self study material before other students and faculty and will be assessed on the basis of their comprehension and presentation.

3 This will form a part of the teacher assessment (TA).

4 Record of the same is kept by the concerned teacher