

Government College of Engineering, Karad

SCHEME OF INSTRUCTION & SYLLABI

Programme: Civil Engineering

Scheme of Instructions : Second Year B. Tech. in Civil Engineering

Semester – III

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	HSMC	CE2301	Values and Ethics	1	-	-	1	1	-	-	50	50	100
2	BSC	CE2302	Mathematics – III	3	-	-	3	3	15	15	10	60	100
3	ESC	CE2303	Fluid Mechanics	3	0	0	3	3	15	15	10	60	100
4	ESC	CE2304	Geoscience	3	0	0	3	3	15	15	10	60	100
5	PCC	CE2305	Mechanics of Materials	3	0	0	3	3	15	15	10	60	100
6	PCC	CE2306	Surveying	3	0	0	3	3	15	15	10	60	100
7	ESC	CE2307	Fluid Mechanics Lab	0	0	2	2	1	0	0	25	00	25
8	ESC	CE2308	Geo science Lab	0	0	2	2	1	0	0	50	00	50
9	PCC	CE2309	Mechanics of Materials Lab	0	0	2	2	1	0	0	25	25	50
10	PCC	CE2310	Surveying Lab	0	0	2	2	1	0	0	25	25	50
11	P/S/CE	CE2311	Industrial Training	0	1	0	1	Audit	-	-	-	25	25
			Total	16	01	08	25	20	75	75	225	425	800

L- Lecture

T-Tutorial

P-Practical

CT1- Class Test 1

TA/CA- Teacher Assessment/Continuous Assessment

CT2- Class Test 2

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 from other discipline)	MCC (Mandatory Courses)	Project / Seminar / Industrial Training
Credits	01	03	08	08	--	--	--	--
Cumulative Sum	04	21	24	08	--	--	--	--

PROGRESSIVE TOTAL CREDITS : 37+20 =57

Government College of Engineering, Karad

SCHEME OF INSTRUCTION & SYLLABI

Programme: Civil Engineering

Scheme of Instructions : Second Year B. Tech. in Civil Engineering

Semester – IV

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	OEC	CE2401	Object Oriented Programming (Open Elective I)	3	-	-	3	3	15	15	10	60	100
2	ESC	CE2402	Structural Mechanics	3	0	0	3	3	15	15	10	60	100
3	PCC	CE2403	Building Planning and Design	3	0	0	3	3	15	15	10	60	100
4	PCC	CE2404	Geotechnical Engineering	3	0	0	3	3	15	15	10	60	100
5	PCC	CE2405	Concrete Technology	3	0	0	3	3	15	15	10	60	100
6	OEC	CE2406	Object Oriented Programming Lab (Open Elective I Lab)	-	-	2	2	1	-	-	25	25	50
7	PCC	CE2407	Geotechnical Engineering Lab	0	0	2	2	1	0	0	25	25	50
8	PCC	CE2408	Concrete Technology Lab	0	0	2	2	1	0	0	25	25	50
9	PCC	CE2409	Building Planning and Design Lab	0	0	2	2	1	0	0	25	25	50
10	MCC	CE2410	Environmental Science*	2	-	-	2	Audit	-	-	-	-	-
11	HSMC	CE2411	Management for Civil Engineering.	1	0	0	1	1	15	15	10	60	100
			Total	18	00	08	26	20	90	90	160	460	800

Every Student will undergo Industrial Training of Two weeks (Minimum) in summer vacation after B. Tech. IV Sem. Examinations. * Environmental Science course will be evaluated on the basis of assignment, field visit report etc. concerned course coordinator will convey the qualified student list to Academic Section.

L- Lecture

T-Tutorial

P-Practical

CT1- Class Test 1

TA/CA- Teacher Assessment/Continuous Assessment

CT2- Class Test 2

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 from other discipline)	MCC (Mandatory Courses)	Project / Seminar / Industrial Training
Credits	01	--	03	12	--	04	Yes	--
Cumulative Sum	05	21	27	19	--	04	Yes	--

PROGRESSIVE TOTAL CREDITS : 57+20 =77

Government College of Engineering, Karad

SCHEME OF INSTRUCTION & SYLLABI

Programme: Civil Engineering

Scheme of Instructions : Third Year B. Tech. in Civil Engineering

Semester – V

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	OEC	CE25*1	Open Elective II	3	-	-	3	3	15	15	10	60	100
2	PCC	CE2502	Design of steel structure	3	0	0	3	3	15	15	10	60	100
3	PCC	CE2503	Foundation Engineering	3	0	0	3	3	15	15	10	60	100
4	PCC	CE2504	Water resources Engineering	3	0	0	3	3	15	15	10	60	100
5	PCC	CE2505	Transportation Engineering	3	0	0	3	3	15	15	10	60	100
6	PEC	CE25*6	Elective I	3	0	0	3	3	15	15	10	60	100
7	PCC	CE2507	Transportation Engineering Lab	0	0	2	2	1	-	-	25	25	50
8	P/S/CE	CE2508	Mini Project	-	-	2	2	1	-	-	50	50	100
9	P/S/CE	CE2509	Industrial Training	-	1	-	1	1	-	-	50	-	50
Total				18	01	04	23	21	90	90	185	435	800

L- Lecture

T-Tutorial

P-Practical

CT1- Class Test 1

TA/CA- Teacher Assessment/Continuous Assessment

CT2- Class Test 2

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 from other discipline)	MCC (Mandatory Courses)	Project / Seminar / Industrial Training
Credits	--	--	--	13	03	03	--	02
Cumulative Sum	05	21	27	32	03	07	Yes	02

PROGRESSIVE TOTAL CREDITS : 77+21= 98

Government College of Engineering, Karad

SCHEME OF INSTRUCTION & SYLLABI

Programme: Civil Engineering

Scheme of Instructions : Third Year B. Tech. in Civil Engineering

Semester – VI

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	HSMC	CE2601	Economics for Engineers	2	-	-	2	2	15	15	10	60	100
2	OEC	CE26*2	Open Elective III	2	-	-	2	2	15	15	10	60	100
3	PEC	CE26*3	Elective – II	3	-	-	3	3	15	15	10	60	100
4	PCC	CE2604	Limit State Design of Concrete Structures	3	0	0	3	3	15	15	10	60	100
5	PCC	CE2605	Quantity Surveying and Valuation	3	0	0	3	3	15	15	10	60	100
6	PCC	CE2606	Environmental Engineering	3	-	-	3	3	15	15	10	60	100
7	PCC	CE2607	Structural design and drawing I Lab	0	0	2	2	1	0	0	25	25	50
8	PCC	CE2608	Quantity Surveying and Valuation Lab	0	0	2	2	1	0	0	25	25	50
9	PCC	CE2609	Environmental Engineering Lab	0	0	2	2	1	0	0	25	25	50
10	HSMC	CE2610	Technical Presentation	-	1	-	1	1	-	-	50	-	50
			Total	16	01	06	23	20	90	90	185	435	800

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

L- Lecture

T-Tutorial

P-Practical

CT1- Class Test 1

TA/CA- Teacher Assessment/Continuous Assessment

CT2- Class Test 2

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 from other discipline)	MCC (Mandatory Courses)	Project / Seminar / Industrial Training
Credits	03	--	--	12	03	02	--	--
Cumulative Sum	08	21	27	44	06	09	Yes	02

PROGRESSIVE TOTAL CREDITS : 98+20=118

Government College of Engineering, Karad

SCHEME OF INSTRUCTION & SYLLABI

Programme: Civil Engineering

Scheme of Instructions : Final Year B. Tech. in Civil Engineering

Semester – VII

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	OEC	CE27*1	Open Elective IV	3	-	-	3	3	15	15	10	60	100
2	PEC	CE27*2	Elective- III	3	0	0	3	3	15	15	10	60	100
3	PEC	CE27*3	Elective IV	3	0	0	3	3	15	15	10	60	100
4	PCC	CE2704	Design of RCC and pre-stressed Concrete structures	3	0	0	3	3	15	15	10	60	100
5	PCC	CE2705	Hydraulic Structures	3	-	-	3	3	15	15	10	60	100
6	OEC	CE27*6	Open Elective IV Lab	-	-	2	2	1	-	-	25	-	25
7	PEC	CE27*7	Elective – III Lab	-	-	2	2	1	-	-	25	-	25
8	PCC	CE2708	Structural design and drawing II	0	0	4	4	2	0	0	25	25	50
9	P/S/IT	CE2709	Seminar	-	1	-	1	1	-	-	25	25	50
10	P/S/IT	CE2710	Industrial Training	-	1	-	1	1	-	-	50	-	50
11	HSMC	CE2701	Construction Management	3	0	0	3	3	15	15	10	60	100
Total				18	02	08	28	24	90	90	210	410	800

L- Lecture

T-Tutorial

P-Practical

CT1- Class Test 1

TA/CA- Teacher Assessment/Continuous Assessment

CT2- Class Test 2

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 from other discipline)	MCC (Mandatory Courses)	Project / Seminar / Industrial Training
Credits	03	--	--	08	07	04	--	02
Cumulative Sum	11	21	27	52	13	13	Yes	04

PROGRESSIVE TOTAL CREDITS : 118+24 = 142

Government College of Engineering, Karad

SCHEME OF INSTRUCTION & SYLLABI

Programme: Civil Engineering

Scheme of Instructions : Final Year B. Tech. in Civil Engineering **(ACADEMIC MODE)**

Semester – VIII

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	OEC	CE28*1	Open Elective V	3	-	-	3	3	15	15	10	60	100
2	PEC	CE28*2	Elective – V	3	-	-	3	3	15	15	10	60	100
3	OEC	CE28*3	Open Elective V Lab	-	-	2	2	1	-	-	50	-	50
4	PCC	CE2804	Software Lab	-	-	2	2	1	-	-	50	50	100
5	P/S/CE	CE2805	Project	-	-	20	20	10	-	-	200	200	400
Total				06	00	24	30	18	30	30	320	370	750

L- Lecture

T-Tutorial

P-Practical

CT1- Class Test 1

TA/CA- Teacher Assessment/Continuous Assessment

CT2- Class Test 2

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 from other discipline)	MCC (Mandatory Courses)	Project / Seminar / Industrial Training
Credits	--	--	--	01	03	04	--	10
Cumulative Sum	11	21	27	53	16	17	Yes	14

PROGRESSIVE TOTAL CREDITS : 142+18= 160

Government College of Engineering, Karad

SCHEME OF INSTRUCTION & SYLLABI

Programme: Civil Engineering

Scheme of Instructions : Final Year B. Tech. in Civil Engineering (**INDUSTRY MODE**)

Semester – VIII

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	CE2806	(MOOC – 1)	-	-	-	-	4	-	-	-	-	-
2	MOOC	CE2807	(MOOC – 2)	-	-	-	-	4	-	-	-	-	-
3	P/S/CE	CE2808	Industry Project	-	-	24	24	10	-	-	200	200	400
Total				00	00	24	24	18	00	00	200	200	400

Note: 1. Students are expected to get MOOC certificate from reputed authorities such as NPTEL/ SWAYAM/ Coursers/ EdX/ Edureka in the field of their Project. The title of the MOOC course should be approved by Project guide.

2.If MOOC course(s) is not available, the department will offer the course against MOOC and will be assessed as per regular theory mode. The student has to study the course(s) in self-learning mode.

3. If the assessment of the MOOC course(s) offered by another agency is delayed, the department shall assess the same.

L- Lecture

T-Tutorial

P-Practical

CT1- Class Test 1

TA/CA- Teacher Assessment/Continuous Assessment

CT2- Class Test 2

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 from other discipline)	MCC (Mandatory Courses)	Project / Seminar / Industrial Training	MOOC
Credits	--	--	--	--	--	--	--	10	08
Cumulative Sum	11	21	27	52	13	13	Yes	14	08

PROGRESSIVE TOTAL CREDITS : 142+18= 160

Government College of Engineering, Karad

SCHEME OF INSTRUCTION & SYLLABI

Programme: Civil Engineering

List of Elective subject:

Elective-I	Elective-II	Elective-III	Elective- III Lab	Elective-IV	Elective-V
CE2516: Town planning and Transportation Engineering	CE2613: Advanced Geotechnical Engineering	CE2712: Remote Sensing and GIS	CE2717: Remote Sensing and GIS Lab	CE2713: Earthquake resistant design of structures	CE2812: Advanced Engineering Geology
CE2526: Air Pollution Control	CE2623: Building Services	CE2722: Water Power Engineering	CE2727: Water Power Engineering Lab	CE2723: Tunnel Engineering	CE2822: Professional Practices in Civil Engineering
CE2536: Advanced Surveying	CE2633: Hydraulics in Environmental Engineering	CE2732: Ground improvement Techniques	CE2737: Ground improvement Techniques Lab	CE2733: Green Building and Sustainability	CE2832: Traffic Engineering
CE2546: Appropriate Technology	CE2643: Advanced Construction Practices	CE2742: Industrial Waste Treatment	CE2747: Industrial Waste Treatment Lab	CE2743: Municipal Solid Waste Management	CE2842: Bridge Engineering
CE2556: Repairs and Rehabilitation of Structures	CE2653: Advanced Structural Analysis	CE2752: Analysis of Indeterminate Structures	CE2757: Analysis of Indeterminate Structures Lab	CE2753: Coastal Engineering	CE2852: Advanced Design of Concrete Structures

List of Open Elective subject:

Open Elective-I	Open Elective-I Lab	Open Elective-II	Open Elective-III	Open Elective-IV	Open Elective-IV Lab	Open Elective-V	Open Elective-V Lab
CE2401: Object Oriented Programming	CE2406: Object Oriented Programming Lab	CE2511: Instrumentation for Construction Engineering	CE2612: Numerical Methods	CE2711: Advanced Computing for Civil Engineering	CE2716 : Advanced Computing for Civil Engineering Lab	CE2811 : MATLAB applications in Civil Engineering	CE2813 : MATLAB applications in Civil Engineering Lab
		CE2521: Soft Computing tools	CE2622: Safety Engineering	CE2721: Data Science for Civil Engineering	CE2726 : Data Science for Civil Engineering Lab		
		CE2531: Environmental Impact Assessment	CE2632: Project Management				

