Government College of Engineering, Karad

(An Autonomous Institute of Government of Maharashtra)

Programme: Information Technology

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

Government College of Engineering, Karad

(An Autonomous Institute of Government of Maharashtra)

B. Tech. Second year – Information Technology
Curriculum Structure
Semester – III (Revised from 2017-18)

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	IT301	Applied Mathematics-III	3	1	-	4	4	15	15	10	60	100
2	PC	IT302	Data Structures and Applications	4	-	-	4	4	15	15	10	60	100
3	PC	IT303	Digital Systems	4	-	-	4	4	15	15	10	60	100
4	PC	IT305	Object Oriented Programming with C++	4	-	-	4	4	15	15	10	60	100
5	PC	IT306	Data Structures and Applications Lab	-	-	2	2	1	-	-	50	25	75
6	PC	IT307	Digital Systems Lab	-	-	2	2	1	-	-	50	-	50
7	PC	IT308	Object Oriented Programming with C++ Lab	-	-	2	2	1	-	-	50	25	75
8	PC	IT309	Discrete Mathematics	4	1	-	5	5	15	15	10	60	100
9	MC	CC301	Environmental Studies	3	-	-	3	0(Audit)	15	15	10	60	100
			Total	22	02	06	30	24	90	90	210	410	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.	BS(Basic Sc.)	ES(Engg. Sc.)	PC (Programme	PE(Programme Electives)	OE (Open Elective)	MC (Mandatory
Credits	-	4	-	20	-	-	-
Cumulative Sum	3	21	28	20	-	-	-

Government College of Engineering, Karad

(An Autonomous Institute of Government of Maharashtra)

B. Tech. Second year – Information Technology
Curriculum Structure

Semester – IV (Revised from 2017-18)

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	IT401	Systems Software	3	-	-	3	3	15	15	10	60	100
2	PC	IT402	Database Management Systems	3	-	-	3	3	15	15	10	60	100
3	PC	IT403	Data Communication	3	-	-	3	3	15	15	10	60	100
4	PC	IT404	Theory of Computer Science	3	-	-	3	3	15	15	10	60	100
5	PC	IT405	Computer Organization and Architecture	3	-	-	3	3	15	15	10	60	100
6	PC	IT406	Systems Software Lab	-	-	2	2	1	-	-	50	-	50
7	PC	IT407	Database Management Systems Lab	-	-	2	2	1	-	-	50	25	75
8	PC	IT408	JAVA Programming Lab	1	-	4	5	3	-	-	50	25	75
9	PC	IT409	Minor Project-I	-	-	2	2	1	-	-	50	-	50
10	HS	HS002	General Proficiency II	2	-	2	4	3	-	-	50	-	50
			Total	18	-	12	30	24	75	75	300	350	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(Engg. Sc.)	PC (Programme	PE (Programme	OE (Open Elective)	MC (Mandatory
Credits	3	-	-	21	-	-	-
CumulativeSum	6	21	28	41	-	-	-

Government College of Engineering, Karad

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B. Tech. Third year – Information Technology
Curriculum Structure
Semester – V (Revised from 2017-18)

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	IT501	Advanced Database Management Systems	3	-	-	3	3	15	15	10	60	100
2	PC	IT502	Computer Networks	3	-	-	3	3	15	15	10	60	100
3	PC	IT503	Software Engineering	3	1	-	4	4	15	15	10	60	100
4	PC	IT504	Operating Systems	3	1	-	4	4	15	15	10	60	100
5	PC	IT505	Microprocessor and Microcontroller	3	1	-	4	4	15	15	10	60	100
6	PC	IT506	Computer Networks Lab	-	-	2	2	1	-	-	75	50	125
7	PC	IT507	Open Source Software Lab	2	-	2	4	3	-	-	75	50	125
8	HS	HS003	General Proficiency III	2	-	2	4	3	-	-	50	-	50
			Total	19	3	6	28	25	75	75	250	400	800

CT1- Class Test 1   TA/CA- Teacher Assessment/Continuous Assessmen
CT2- Class Test 2   ESE- End Semester Examination (For Laboratory: End Semester Performance)

Credits Distribution

Course Category	HS (Hum.	BS(Basic Sc.)	ES (Eng. Sc.)	PC (Programme	PE(Programme Electives)	OE (Open Elective)	MC (Mandatory
Credits	3	-	-	22	-	-	-
Cumulative Sum	9	21	28	63	-	-	-

Government College of Engineering, Karad

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B. Tech. Third year – Information Technology
Curriculum Structure

Semester – VI (Revised from 2017-18)

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	OE641	Open Elective-Web Technology	2	-	2	4	3	-	-	50	50	100
2	PC	IT602	Data Warehousing and Mining	4	-	-	4	4	15	15	10	60	100
3	PC	IT603	Computer Algorithms	4	1	-	5	5	15	15	10	60	100
4	PC	IT604	Object Oriented Software and Web Engineering	4	1	-	5	5	15	15	10	60	100
5	PC	IT605	Information Security	4	-	-	4	4	15	15	10	60	100
6	PC	IT606	Data Warehousing and Mining Lab	-	-	2	2	1	-	-	75	-	75
7	PC	IT607	Information Security Lab	-	-	2	2	1	-	-	50	50	100
8	PC	IT608	Minor Project-II	-	-	2	2	2	-	-	75	50	125
			Total	18	02	08	28	25	60	60	290	390	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)

Credits Distribution

Course Category	HS (Hum.	BS(Basic Sc.)	ES(Engg. Sc.)	PC (Programme	PE(Programme Electives)	OE (Open Elective)	MC (Mandatory
Credits	-	-	-	22	-	3	-
Cumulative Sum	9	21	28	85	-	3	-

Government College of Engineering, Karad

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B. Tech. Fourth year – Information Technology
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	IT701	Software Testing and Quality Assurance	3	-	-	3	3	15	15	10	60	100
2	PC	IT702	Multimedia Systems	4	-	-	4	4	15	15	10	60	100
3	PC	IT703	Information Retrieval	3	-	-	3	3	15	15	10	60	100
4	PE	IT7*4	Elective I	3	-	-	3	3	15	15	10	60	100
5	PC	IT705	Software Testing and Quality Assurance Lab	-	-	2	2	1	-	-	50	-	50
6	PC	IT706	Multimedia Systems Lab	-	-	2	2	1	-	-	50	-	50
7	PC	IT707	Advanced Software Technology Lab I	2	-	4	6	4	-	-	50	50	100
8	PC	IT708	Seminar	-	-	1	01	1	-	-	50	-	50
9	PC	IT709	Project Phase-I	-	-	2	2	4	-	-	50	50	100
10	PC	IT710	Industrial Training/ Mini Project	-	-	-	-	2	-	-	50	-	50
			Total	15	-	11	26	26	60	60	340	340	800

*- Elective- I list is provided at the end of 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.	BS(Basic Sc.)	ES(Engg. Sc.)	PC (Programme	PE(Programme Electives)	OE (Open Elective)	MC (Mandatory
Credits	-	-	-	23	3	-	-
Cumulative	9	21	28	108	3	3	-

Government College of Engineering, Karad

(An Autonomous Institute of Government of Maharashtra)
B. Tech. Fourth year – Information Technology
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	IT801	Principles of Management	4	-	-	4	4	15	15	10	60	100
2	PC	IT802	Cloud Computing and Storage Management	4	-	-	4	4	15	15	10	60	100
3	PE	IT8*3	Elective II	3	-	-	3	3	15	15	10	60	100
4	PE	IT8*4	Elective III	3	-	-	3	3	15	15	10	60	100
5	PC	IT805	Cloud Computing and Storage Management Lab	-	-	2	2	1	-	-	50	-	50
6	PE	IT8*6	Elective III Lab	-	-	2	2	1	-	-	50	-	50
7	PC	IT807	Advanced Software Technology Lab II	1	-	2	3	2	-	-	50	50	100
8	PC	IT808	Project Phase-II	-	-	5	5	8	-	-	100	100	200
			Total	15	-	11	26	26	60	60	290	390	800

*- Elective- II & 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. Sic)	BS(Basic Sc.)	ES(Engg. Sc.)	PC (Programme Core)	PE(Programme Electives)	OE (Open Elective)	MC (Mandatory Course)
Credits	-	-	-	19	7	-	-
Cumulative	**9**	**21**	**28**	**127**	**-**	**3**	**-**

Government College of Engineering, Karad
(An Autonomous Institute of Government of Maharashtra)
Programme: Information Technology
List of Electives offered by IT Department

Open Elective	Elective I	Elective II	Elective III
Semester - VI	Semester - VII	Semester - VIII	Semester - VIII
OE641 Web Technology	**IT714** Artificial Intelligence	**IT813** Soft Computing	**IT814** Parallel Computing
	IT724 Internet of Things	**IT823** Ethical Hacking and Digital Forensic	**IT824** Bioinformatics
	IT734 Human Computer Interface	**IT833** Gaming Architecture and Design	**IT834** Enterprise Resource Planning

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 as 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.