Government College of Engineering, Karad

(An Autonomous Institute of Government of Maharashtra)

B. Tech. Fourth year - Mechanical 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	ME701	Refrigeration and Air Conditioning	3	-	-	3	3	15	15	10	60	100
2	PC	ME702	Finite Element Analysis	3	-	-	3	3	15	15	10	60	100
3	PC	ME703	Automobile Engineering	3	-	-	3	3	15	15	10	60	100
4	PC	ME704	Mechanical System Design	3	1	-	4	4	15	15	10	60	100
5	PE	ME715 ME725 ME735 ME745 ME 755	Elective-I Industrial Product Design Elective-I Operations research Elective-I Total Quality Management Elective-I Advanced I.C. Engines Elective – I Design of Pressure Vessels	3	-	-	3	3	15	15	10	60	100
6	PC	ME706	Refrigeration and Air Conditioning-Lab	-	-	2	2	1	-	-	25	25*	50
7	PC	ME707	Finite Element Analysis Lab	-	-	2	2	1	-	-	25		25
8	PC	ME708	Automobile Engineering Lab			2	2	1	-	-	25		25
9	PC	ME709	Seminar	-		1	1	1	-	-	50	-	50
10	PC	ME710	Project Phase I	-	-	2	2	4			50	50**	100
11	PC	ME711	Industrial Training	-	-	-	-	2	-	-	50	-	50
			Total	15	1	9	25	26	75	75	275	375	800

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

* ESE based on performance in Practical Examination;**For Project Phase-I ESE is based on the presentation showing progress of the project work

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	-	-	-	23	3	-	-
Cumulative Sum	09	21	35	101	03	03	-

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	ES	ME801	Mechatronics	3	-	-	3	3	15	15	10	60	100
2	PC	ME802	Noise and Vibration	3	-	-	3	3	15	15	10	60	100
3	PC	ME803	Energy and Power Engineering	3	-	-	3	3	15	15	10	60	100
4	PE	ME814 ME824 ME834 ME844 ME854	Elective II- Industrial Automation & Robotics Elective II- Machine Tool Design Elective II- Computational Fluid Dynamics Elective II-Tool design Elective II-Process Equipment Design	3	-	-	3	3	15	15	10	60	100
5	PE	ME815 ME825 ME835 ME845 ME855	Elective III-Advanced Foundry Processes Elective III- Industrial Engineering Elective III- Advanced Refrigeration Elective III- Engineering Economics & Financial Management Piping and pipeline engineering	3	-	-	3	3	15	15	10	60	100
6													
7	ES	ME806	Mechatronics Lab	-	-	2	2	1	-	-	25	-	25
8	PC	ME807	Noise and Vibration Lab	-	-	2	2	1	-	-	25	25	50
9	PE	ME808	Elective II - Industrial Automation and Robotics	-	-	2	2	1	-	-	25	-	25
	PE	ME 818	Elective II- Machine Tool Design	-	-	2	2	1	-	-	25	-	25
	PE	ME828	Elective II- Computational Fluid Dynamics	-	-	2	2	1	-	-	25	-	25
	PE	ME838	Elective II-Tool design	-	-	2	2	1	-	-	25	-	25
	PE	ME848	Elective II-Process Equipment Design	-	-	2	2	1	-	-	25	-	25
	PC	ME809	Project Phase II	-	-	5	5	8	-	-	100	100**	200
			Total	15	-	11	26	26	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 based on performance in Practical Examination # Practical to be conducted at alternate weeks** ESE based on the demonstration of the project work

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	-	-	04	15	7	-	-
Cumulative Sum	09	21	39	116	10	03	-

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.

i. 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.
ii. 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.
iii. This will form a part of the teacher assessment (TA).
iv. Record of the same is kept by the concerned teacher.