

GOVERNMENT COLLEGE OF ENGINEERING, JALGAON.

Department of (Mechanical Engineering).

Scheme for B. Tech. (Mechanical Engineering)

SEM III

Course Code	Name of the Course	Group	Teaching Scheme Hrs /week				Evaluation Scheme							Credits
							Theory				Practical		Total	
			TH	TUT	PR	Total	ISA	ISE1	ISE2	ESE	ICA	ESE		
ME201	Fluid Mechanics	D	3	1	---	4	10	15	15	60	---	---	100	4
SH202	Engineering Mathematics-III	A	3	1	---	4	10	15	15	60	---	---	100	4
ME202	Engineering Thermodynamics	D	3	---	---	3	10	15	15	60	---	---	100	3
ME203	Manufacturing Engineering	D	3	---	---	3	10	15	15	60	---	---	100	3
CE 221	Strength of Materials	B	3	---	---	3	10	15	15	60	---	---	100	3
SH 204	General Proficiency II	C	1	---	2	3	---	---	---	---	25	25	50	2
ME204	Fluid Mechanics Lab	D	---	---	2	2	---	---	---	---	25	25	50	1
ME205	Engineering Thermodynamics Lab	D	---	---	2	2	---	---	---	---	25	25	50	1
ME206	Workshop Practice-III	D	---	---	2	2	---	---	---	---	50	--	50	1
CE222	Strength of Materials Lab	B	---	---	2	2	---	---	---	---	50	--	50	1
Total			16	2	10	28	50	75	75	300	175	75	750	23

SEM IV

Course Code	Name of the Course	Group	Teaching Scheme Hrs /week				Evaluation Scheme							Credits
							Theory				Practical		Total	
			TH	TUT	PR	Total	ISA	ISE1	ISE2	ESE	ICA	ESE		
EE 271	Electrical Machines & Drives	B	3	---	---	3	10	15	15	60	---	---	100	3
ME251	Theory of Machine-I	D	3	---	---	3	10	15	15	60	---	---	100	3
ME252	Advance Manufacturing Processes	D	3	---	---	3	10	15	15	60	---	---	100	3
ME253	Applied Thermodynamics	D	3	---	---	3	10	15	15	60	---	---	100	3
ME254	Machine Drawing	D	3	---	---	3	10	15	15	60	---	---	100	3
ME255	Computer Graphics	D	1	---	2	3	---	---	---	---	50	50	100	2
EE 272	Electrical Machines & Drives Lab	B	---	---	2	2	---	---	---	---	25	25	50	1
ME256	Theory of Machine - I Lab	D	---	---	2	2	---	---	---	---	25	25	50	1
ME257	Workshop Practice – IV	D	---	---	2	2	---	---	---	---	50	--	50	1
ME258	Applied Thermodynamics Lab	D	---	---	2	2	---	---	---	---	25	25	50	1
ME259	Machine Drawing Lab	D	---	---	4	4	---	---	---	---	25	25	50	2
Total			16	0	14	30	50	75	75	300	200	150	850	23

TH: Theory Lecture,

ISA :Internal Sessional Assessment

TUT: Tutorial,

ISE : In Semester Examination

PR: Practical

ESE: End Semester Examination

ICA : Internal Continuous Assessment

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SEM V

Course Code	Name of the Course	Group	Teaching Scheme Hrs /week				Evaluation Scheme						Credits	
							Theory				Practical			Total
			TH	TUT	PR	Total	ISA	ISE1	ISE2	ESE	ICA	ESE		
ME301	Machine Design –I	D	3		---	3	10	15	15	60	---	---	100	3
ME302	Theory of Machines-II	D	3		---	3	10	15	15	60	---	---	100	3
ME303	Industrial Engineering and Management	C	3		---	3	10	15	15	60	---	---	100	3
ME304	Material Science and Engineering Metallurgy	D	3		---	3	10	15	15	60	---	---	100	3
ME305	Heat Transfer	D	3		---	3	10	15	15	60	---	---	100	3
ME306	Mechanical Measurements	D	1		---	2	---	---	---	---	50	---	50	2
ME307	Machine Design –I Lab	D	---		---	2	---	---	---	---	25	25	50	1
ME308	Theory of Machines –II Lab	D	---		---	2	---	---	---	---	25	25	50	1
ME309	Material Science and Engineering Lab	D	---		---	2	---	---	---	---	25	25	50	1
ME310	Heat Transfer Lab	D	---		---	2	---	---	---	---	25	25	50	1
ME311	Self Study - I	D	---		---	---	---	---	---	---	---	---	50**	2
Total			16		12	28	50	75	75	300	150	100	800	23

SEM VI

Course Code	Name of the Course	Group	Teaching Scheme Hrs /week				Evaluation Scheme						Credits	
							Theory				Practical			Total
			TH	TUT	PR	Total	ISA	ISE1	ISE2	ESE	ICA	ESE		
ME351	Internal Combustion Engines	D	3	--	---	3	10	15	15	60	---	---	100	3
ME352	Metrology and Quality control	D	3		---	3	10	15	15	60	---	---	100	3
ME353	Turbo Machinery	D	3		---	3	10	15	15	60	---	---	100	3
ME354	Machine Design –II	D	3		---	3	10	15	15	60	---	---	100	3
ME355	Numerical Analysis and Computational Methods	B	3		---	3	10	15	15	60	---	---	100	3
ME356	Internal Combustion Engines Lab	D	---		---	2	---	---	---	---	25	25	50	1
ME357	Metrology and Quality Control Lab	D	---		---	2	---	---	---	---	25	25	50	1
ME358	Turbo Machinery Lab	D	---		---	2	---	---	---	---	25	25	50	1
ME359	Machine Design -II Lab	D	---		---	2	---	---	---	---	25	25	50	1
ME360	Mini Project	D	---		---	4	---	---	---	---	50	---	50	2
ME361	Self Study - II	D	---		---	---	---	---	---	---	---	---	50**	2
ME362	Industrial Lectures*	D	1		---	1	---	---	---	---	---	---	---	---
Total			16		12	28	50	75	75	300	150	100	800	23

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ICA : Internal Continuous Assessment

*Evaluation of the course ME362 Industrial Lectures shall be done in VIIIth semester along with the subject ME460 Industrial Lectures.

- ****Marks and hence grade of course Self Study shall be based on one test each conducted on 20% syllabus of five subjects ME351, ME352, ME353, ME354, ME355. One faculty member should be appointed as course coordinator for the course 'self study' to compile the marks of all tests and enter in to MIS.**
- **The 20% syllabus for self - study shall be declared by subject teacher at the beginning of semester and he/she shall conduct the test examination for that course, assess answer papers of test examination and submit the marks to course coordinator.**

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SEM VII

Course Code	Name of the Course	Group	Teaching Scheme Hrs/week				Evaluation Scheme						Credits	
							Theory				Practical			Total
			TH	TUT	PR	Total	ISA	ISE1	ISE2	ESE	ICA	ESE		
ME401	Refrigeration and Air Conditioning	D	3	--		3	10	15	15	60	---	---	100	3
ME402	Elective -I	C	3	---		3	10	15	15	60	---	---	100	3
ME403	Inter-disciplinary Elective	E	3	---		3	10	15	15	60	---	---	100	3
ME404	CAD/CAM	E	3	---		3	10	15	15	60	---	---	100	3
ME405	Programming in C ++	D	1		2	3	--	--	--	--	50	---	50	2
ME406	Refrigeration and Air Conditioning Lab	D	---	---	2	2	---	---	---	---	25	25	50	1
ME407	Elective -I Lab	D	---	---	2	2	---	---	---	---	25	25	50	1
ME408	CAD/CAM Lab	E	---	---	2	2	---	---	---	---	25	25	50	1
ME409	Project Phase-I	D	---	---	2	2	---	---	---	---	50	50	100	2
ME410	Seminar	D	---	---	2	2	---	---	---	---	50	--	50	2
ME411	Self Study - III	D	---	---	---	---	---	---	---	---	--	---	50**	2
Total			13	--	12	25	40	60	60	240	225	125	800	23

TH: Theory Lecture,

ISA :Internal Sessional Assessment

TUT: Tutorial,

ISE : In Semester Examination

PR: Practical

ESE: End Semester Examination

ICA : Internal Continuous Assessment

Interdisciplinary Elective

- A Operations Research
- B Renewable Energy Sources
- C Introduction to Robotics
- D Materials Management and Cost Estimation

Elective I

- A Automobile Engineering - I
- B Mechatronic System
- C Tool Engineering
- D Design of Thermal Equipment and Steam Turbine

- ****Marks and hence grade of course Self Study shall be based on one test each conducted on 20% syllabus of four subjects – ME401, ME402, ME403, ME404. One faculty member should be appointed as course coordinator for the course ‘self study’ to compile the marks of all tests and enter in to MIS.**
- **The 20% syllabus for self - study shall be declared by subject teacher at the beginning of semester and he/she shall conduct the test examination for that course, assess answer papers of test examination and submit the marks to course coordinator.**

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SEM VIII

Course Code	Name of the Course	Group	Teaching Scheme Hrs/week				Evaluation Scheme							Credits
							Theory				Practical			
			TH	TUT	PR	Total	ISA	ISE1	ISE2	ESE	ICA	ESE	Total	
ME451	Finite Element Method	D	3	---	---	3	10	15	15	60	---	---	100	3
ME452	Project and Financial Management	D	3	---	---	3	10	15	15	60	---	---	100	3
ME453	(Elective II)	E	3	---	---	3	10	15	15	60	---	---	100	3
ME454	(Elective III)	E	3	---	---	3	10	15	15	60	---	---	100	3
ME455	Finite Element Method Lab	D	---	---	2	2	---	---	---	---	25	25	50	1
ME456	(Elective II) Lab	E	---	---	2	2	---	---	---	---	25	25	50	1
ME457	(Elective III) Lab	E	---	---	2	2	---	---	---	---	25	25	50	1
ME458	Project Phase- II	D	---	---	4	4	---	---	---	---	50	50	100	4
ME459	Industrial Visit/ Training	D	---	---	---	---	---	---	---	---	50	---	50	1
ME460	Industrial Lectures	D	1	---	---	1	---	---	---	---	50	---	50	1
ME461	Self Study IV	D	--	---	---	---	---	---	---	---	---	---	50**	2
Total			13		10	23	40	60	60	240	225	125	800	23

TH: Theory Lecture,

ISA :Internal Sessional Assessment

TUT: Tutorial,

ISE: In Semester Examination

PR: Practical

ESE: End Semester Examination

ICA : Internal Continuous Assessment

Elective II

- A Power Plant Engineering
- B Automobile Engineering - II
- C Machine Tool Design
- D Process Equipment Design

Elective III

- A Advance Machine Design
- B Mechanical Vibrations
- C Tribology
- D Computational Fluid Dynamics

- **Marks and hence grade of course Self Study shall be based on one test each conducted on 20% syllabus of four subjects – ME451, ME 452, ME453, ME 454. One faculty member should be appointed as course coordinator for the course ‘self study’ to compile the marks of all tests and enter in to MIS.**
- **The 20% syllabus for self - study shall be declared by subject teacher at the beginning of semester and he/she shall conduct the test examination for that course, assess answer papers of test examination and submit the marks to course coordinator.**
- **In the course Industrial Lectures, at least 12 lectures from industrial expert should be arranged and continuously assessed (06 lectures in VIth and VIIIth semester each).**