

GOA UNIVERSITY
THIRD YEAR OF BACHELOR'S DEGREE COURSE IN ENGINEERING
(Revised in 2007-08)
SCHEME OF INSTRUCTION AND EXAMINATION

SEMESTER III

Sub. Code	Subject	Scheme of Instructions (Hours/Weeks)			Scheme of Examination					
		L	T	P	Dur of Th / Pr Hrs	Marks				
						Th	S	P	O	Total
3.1	Engineering Mathematics	3	1	-	3	100	25	-	-	125
3.2	Machine Drawing	1	1	3	4	100	25	-	-	125
3.3	Applied Thermodynamics	3	1	-	3	100	25	-	-	125
3.4	Engineering Material Science	3	1	-	3	100	25	-	-	125
3.5	Fluid Mechanics	3	1	-	3	100	25	-	-	125
3.6	Digital Electronic and Microprocessor Application	3	1	-	3	100	25	-	-	125
3.7	Practical in Applied Thermodynamics	-	-	2	-	-	-	25	-	25
3.8	Practical in Engineering Material Science	-	-	2	-	-	-	25	-	25
3.9	Practical in Fluid Mechanics	-	-	2	-	-	-	25	-	25
3.10	Practical in Digital Electronic and Microprocessor Application	-	-	2	-	-	-	25	-	25
Total		16	06	11	-	600	150	100	-	850

L: Lecture, T: Tutorial, P: Practical

Th. Dur. : Duration of theory paper

Th. : Theory, S: Sessional, P: Practical, O: Oral

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SEMESTER IV

Sub. Code	Subject	Scheme of Instructions (Hours/Weeks)			Scheme of Examination					
		L	T	P	Dur of Th / Pr Hrs	Marks				
						Th	S	P	O	Total
4.1	Theory of Machines I	3	-	2	3	100	25	-	-	125
4.2	Mechanics of Solids	3	1	-	3	100	25	-	-	125
4.3	Numerical Techniques & Computer Programming	3	1	-	3	100	25	-	-	125
4.4	Electrical Technology	3	-	-	3	100	25	-	-	125
4.5	Manufacturing Technology I	3	1	-	3	100	25	-	-	125
4.6	Energy Conversion	3	1	-	3	100	25	-	-	125
4.7	Practicals in Numerical Techniques & Computer Programming	-	-	2	-	-	-	25	-	25
4.8	Practicals in Electrical Technology	-	-	2	-	-	-	25	-	25
4.9	Practicals in Manufacturing Technology I	-	-	2	-	-	-	25	-	25
4.10	Practicals in Energy Conversion	-	-	2	-	-	-	25	-	25
Total		18	04	10	-	600	150	100	-	850

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SEMESTER V

Sub. Code	Subject	Scheme of Instructions (Hours/Weeks)			Scheme of Examination					
					Th. Dur hrs.	Marks				
		L	T	P		Th	S	P	O	Total
5.1	Machine Design I	3	-	2	3	100	25	-	-	125
5.2	Engg Economics & Management	3	1	-	3	100	25	-	-	125
5.3	Heat & Mass Transfer	3	1	-	3	100	25	-	-	125
5.4	Manufacturing Technology II	3	1	-	3	100	25	-	-	125
5.5	Theory of Machines II	3	1	-	3	100	25	-	-	125
5.6	Quality Engg. Management	3	-	-	3	100	25	-	-	125
5.7	Practicals in Heat and Mass Transfer	-	-	2	-	-	-	25	-	25
5.8	Practicals in Manufacturing Technology II	-	-	2	-	-	-	25	-	25
5.9	Practicals in Theory of Machines II	-	-	2	-	-	-	25	-	25
5.10	Practicals in Quality Engg. Management	-	-	2	-	-	-	-	25	25
Total		18	04	10	-	600	150	75	25	850

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SEMESTER VI

Sub. Code	Subject	Scheme of Instructions (Hours/Weeks)			Scheme of Examination					
		L	T	P	Th. Dur hrs.	Marks				
						Th	S	P	O	Total
6.1	Industrial Engg.	3	1	-	3	100	25	-	-	125
6.2	Machine Design II	3	-	2	3	100	25	-	25	150
6.3	Gas Dynamics and Turbomachineries	3	1	-	3	100	25	-	-	125
6.4	Engineering Measurements & Metrology	3	-	-	3	100	25	-	-	125
6.5	Mechatronics	3	1	-	3	100	25	-	-	125
6.6	Operations & Project Management	3	1	-	3	100	25	-	-	125
6.7	Practicals in Gas Dynamics and Turbomachineries	-	-	2	-	-	-	25	-	25
6.8	Practicals in Engg. Measurements & Metrology	-	-	2	-	-	-	25	-	25
6.9	Practicals in Mechatronics	-	-	2	-	-	-	25	-	25
Total		18	04	8	-	600	150	75	25	850

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SEMESTER VII

Sub Code	Subject	Scheme of instruction (hours/week)			Scheme of examination					
		L	T	P	Th Dur (hrs)	Marks				
						Th	S	P	O	Total
7.1	CAD-CAM	3	1	2	3	100	25	25	25	175
7.2	Refrigeration & Air Conditioning	3	1	2	3	100	25	25	25	175
7.3	Manufacturing Technology III	3	1	-	3	100	25	-	-	125
7.4	Elective I	3	1	2*	3	100	25	-	25	150
7.5	Elective II	3	1	2*	3	100	25	-	25	150
7.6	Project	-	-	4	3	-	25**	-	50	75
Total		15	05	12	-	500	150	50	150	850

*Practical slots for Electives subjects are to be decided based on nature of subjects offered and explicitly specified in the Elective list.

A journal containing assignments such as design exercises/or experiments conducted and results obtained to be submitted for assessment.

** Progress Seminar of PROJECT

Elective 4- major groups (thermal, design, manufacturing and industrial) and I-non departmental like computer, IT and management.

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Revised Course (Revised in 2007-08) sem VII (Mech) Electives to be introduced from I term of 2010-2011

Subject Code	Subject Title
7.4.1	Advanced mechanic of solids
7.4.2	Tool Engg. Design
7.4.3	Cryogenics
7.4.4	Engineering Tribology
7.4.5	Management Information system
7.4.6	6-Sigma Management
7.4.7	Analysis & Synthesis of Mechanisms
7.4.8	Artificial Intelligence
7.5.1	Random Vibrations
7.5.2	Advanced material Technology
7.5.3	Rapid Prorotyping
7.5.4	Design of Thermal System
7.5.5	Stochastic Process
7.5.6	Applied O.R.
7.5.7	Automobile Engg.
7.5.8	MEMS

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SCHEME OF INSTRUCTION AND EXAMINATION

SEMESTER VIII

Sub Code	Subject	Scheme of instruction (hours/week)			Scheme of examination					
		L	T	P	Th Dur (hrs)	Marks				
						Th	S	P	O	Total
8.1	Reliability based Design	3	1	-	3	100	25	-	50	175
8.2	Power Plant Enginerring	3	1	-	3	100	25	-	50	175
8.3	Elective III	3	1	2*	3	100	25	-	50	175
8.4	Elective IV	3	1	2*	3	100	25	-	50	175
8.5	Project	-	-	8	-	-	50	-	100**	150
Total		15	04	12*	-	400	150		300	850

L: Lecture, T: Tutorial, P: Practical

Th.Dur: Duration of theory paper

Th: Theory, S: Sessional, P: Practical, O:Oral

*Practical slots for Electives subjects are to be decided based on nature of subjects offered and explicitly specified in the Elective list.

A journal containing assignments such as design exercises/or experiments conducted and results obtained to be submitted for assessment during oral examination.

** Seminar, demonstration & Oral

Elective 4- major groups (thermal, design, manufacturing and industrial) and I-non departmental like computer, IT and management.

BE(M)-Semester VIII

Elective III	
Code	Title
8.3.1	Finite element methods
8.3.2.	Industrial Robotics
8.3.3	Computational Fluid Mechanics
8.3.4	Maintenance Engineering and Management
8.3.5	System simulation
8.3.6	Control System Engineering
8.3.7	Energy management

BE(M)-Semester VIII

Elective IV	
Code	Title
8.4.1	Precision engineering
8.4.2.	Advanced metal forming
8.4.3	Supply chain management
8.4.4	Low cost automation
8.4.5	Fluid power control
8.4.6	Nano Technology