

Mechatronics

Semester III

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
	Advance Engineering Mathematics	3	2	0	5	70	30	30	20	150	20
	Mechanics of Solids	4	0	2	6	70	30	30	20	150	20
	Industrial Drafting	2	0	2	4	70	30	30	20	150	20
	Simulation & Design Tools	0	0	3	3	0	0	100	50	150	20
	Design Concepts in Basic Electronics	4	0	2	6	70	30	30	20	150	20
	Principles Of Materials Science And Physical Metallurgy	4	0	2	6	70	30	30	20	150	20
	Total	17	2	11	30						

Semester IV

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
	Maths - IV	3	2	0	5	70	30	30	20	150	20
	Engineering Economics and Management	3	0	0	3	70	30	0	0	100	20
	Control Theory	4	0	2	6	70	30	30	20	150	20
	Engineering Thermodynamics	4	1	0	5	70	30	30	20	150	20
	Kinematics & Dynamics of Machines	4	0	2	6	70	30	30	20	150	20
	Object Oriented Programming in C++	3	0	2	5	70	30	30	20	150	20
	Total	21	3	6	30						

Semester V

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
	Open Elective / Interdisciplinary	3	2	0	5	70	30	30	20	150	20
	Micro Processors and Micro Controllers	4	0	2	6	70	30	30	20	150	20
	Electro Mechanical Energy Conversion	4	0	2	6	70	30	30	20	150	20
	Design of Mechanisms - I	4	0	2	6	70	30	30	20	150	20
	Fluid Mechanics & Machines	4	0	2	6	70	30	30	20	150	20
	Total	19	2	8	29						

Semester VI

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
	Departmental Elective - I	4	0	2	6	70	30	30	20	150	20
	Manufacturing Technology - I	4	0	2	6	70	30	30	20	150	20
	Control of Electric Drives	4	0	2	6	70	30	30	20	150	20
	Hydraulic & Pneumatic Systems	4	0	2	6	70	30	30	20	150	20
	Electro Mechanical Measurements & Instruments	4	0	2	6	70	30	30	20	150	20
	Total	20	0	10	30						

Semester VII

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
	Departmental Elective - II	4	0	2	6	70	30	30	20	150	20
	Microcontrollers and Embedded Systems	3	0	2	5	70	30	30	20	150	20
	Automated Manufacturing - I	3	0	2	5	70	30	30	20	150	20
	Manufacturing Technology - II	3	0	2	5	70	30	30	20	150	20
	Production Optimization Techniques	3	2	0	5	70	30	30	20	150	20
	Project - I	0	0	4	4	0	0	100	50	150	20
	Total	16	2	12	30						

Semester VIII

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
	Departmental Elective - III	4	0	2	6	70	30	30	20	150	20
	Programmable Logic Controllers	3	0	2	5	70	30	30	20	150	20
	Automated Manufacturing - II	3	0	2	5	70	30	30	20	150	20
	Quality Assurance & Reliability	3	0	0	3	70	30	0	0	100	20
	Design of Mechanisms - II	3	0	0	3	70	30	0	0	100	20
	Project - II	0	0	8	8	0	0	100	50	150	20
	Total	16	0	14	30						

Departmental Elective I:

Computer Aided Design for Mechatronics
MEMS & Nanotechnology

Departmental Elective II:

Modern Control Systems
Metrology & Product Engineering

Departmental Elective III:

Machine Vision
Theory of Mechanisms

Institute Elective

Quantitative Techniques in Management

Note: ALA Component, OEP Component and Design Module I, II and III (to be offered in 2nd Year , 3rd year and 4th year respectively) shall be displayed in the final teaching scheme