GUJARAT TECHNOLOGICAL UNIVERSITY

(Revised on 12th Jan 2015)

Aeronautical Engineering (01)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140003	Engineering Economics and Management	3	0	0	3	70	30	0	0	100	1
2140101	Aircraft Structures I	3	1	0	4	70	30	30	20	150	1
2140103	Aircraft Systems, Instruments and Maintenance	4	2	0	6	70	30	30	20	150	1
2140105	Numerical Methods	3	2	0	5	70	30	30	20	150	1
2140106	Basic Engineering Thermodynamics	4	1	0	5	70	30	30	20	150	1
2140107	Computational fluid dynamics I	3	0	2	5	70	30	30	20	150	1
2140108	Solid and Surface Modelling	0	0	2	2	0	0	80	20	100	1
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	1
	Total	20	6	4	33						

Automobile Engineering (02)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140003	Engineering Economics and Management	3	0	0	3	70	30	0	0	100	2
2140203	Automobile Engines	3	0	2	5	70	30	30	20	150	2
2141901	Mechanical Measurement & Metrology	3	0	2	5	70	30	30	20	150	2
2141905	Complex Variables and Numerical Methods	3	2	0	5	70	30	30	20	150	2
2141906	Fluid Mechanics	4	0	2	6	70	30	30	20	150	2
2141907	Machine Design & Industrial Drafting	4	0	2	6	70	30	30	20	150	2
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	2
	Total	20	2	8	33						

Biomedical Engineering (03)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2141703	Numerical Techniques & Statistical Methods	3	2	0	5	70	30	30	20	150	3
2140304	Microprocessor & its Interfacing	4	0	2	6	70	30	30	20	150	3
2140305	Analog Circuits-II	4	0	2	6	70	30	30	20	150	3
2140306	Biosensors & Transducers	4	0	2	6	70	30	30	20	150	3
2140307	Control System and Analysis	3	0	2	5	70	30	30	20	150	3
2140308	Mini Project 1/Internship/RA/TA	0	0	2	2	0	0	80	20	100	3
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	3
	Total	18	2	10	33						

Bio-Technology(04)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140003	Engineering Economics and Management	3	0	0	3	70	30	0	0	100	4
2140401	Molecular Biology and Genetics	3	0	2	5	70	30	30	20	150	4
2140402	Basic Taxonomy and Techniques	2	0	2	4	70	30	30	20	150	4
2140403	Principles of Process Engineering-I	3	0	3	6	70	30	30	20	150	4
2140405	Cell Biology and Industrial Biotechnology	4	0	3	7	70	30	30	20	150	4
2140406	Stoichiometry	3	2	0	5	70	30	30	20	150	4
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	4
	Total	18	2	10	33						

Chemical Engineering (05)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140003	Engineering Economics and Management	3	0	0	3	70	30	0	0	100	5
2140501	Physical And Inorganic Chemistry	3	0	4	7	70	30	30	20	150	5
2140502	Chemical Engineering Thermodynamics - I	3	1	0	4	70	30	30	20	150	5
2140503	Process Heat Transfer	3	0	3	6	70	30	30	20	150	5
2140505	Chemical Engineering Maths	3	2	0	5	70	30	30	20	150	5
2140506	Chemical Process Industries -II	3	0	2	5	70	30	30	20	150	5
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	5
	Total	18	3	9	33						

Civil Engineering (06)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140003	Engineering Economics and Management	3	0	0	3	70	30	0	0	100	6
2140601	Advanced Surveying	3	0	2	5	70	30	30	20	150	6
2140603	Structural Analysis-I	4	2	0	6	70	30	30	20	150	6
2140606	Numerical and Statistical Methods for Civil Engineering	3	2	0	5	70	30	30	20	150	6
2140607	Buliding & Town Planning	4	0	2	6	70	30	30	20	150	6
2140608	Concrete Technology	3	0	2	5	70	30	30	20	150	6
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	6
	Total	20	4	6	33						

Computer Engineering (07), Computer Sceince & Engineering (31)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140702	Operating System	4	0	2	6	70	30	30	20	150	7, 31
2140705	Object Oriented Programming With C++	4	0	4	8	70	30	30	20	150	7, 31
2140706	Numerical and Statistical Methods for Computer Engineering	3	0	2	5	70	30	30	20	150	7, 31
2140707	Computer Organization	4	1	0	5	70	30	30	20	150	7, 31
2140709	Computer Networks	4	0	2	6	70	30	30	20	150	7, 31
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	7, 31
	Total	19	1	13	33						

Electrical & Electronics Engineering (08)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2141002	Analog Circuit Design	4	0	2	6	70	30	30	20	150	8
2141006	Simulation and Design Tools	0	0	2	2	0	0	80	20	100	8
2140910	Digital Electronics	3	0	2	5	70	30	30	20	150	8
2140906	AC Machines	4	0	2	6	70	30	0	0	100	8
2140908	Electrical Power Generation	4	0	2	6	70	30	30	20	150	8
2140909	Field Theory	3	2	0	5	70	30	30	20	150	8
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	8
	Total	18	2	10	33						

Electrical Engineering (09)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140910	Digital Electronics	3	0	2	5	70	30	30	20	150	9
2140906	AC Machines	4	0	2	6	70	30	30	20	150	9
2140907	Applied Thermal and Hydraulic Engineering	3	0	0	3	70	30	0	0	100	9
2140908	Electrical Power Generation	4	0	2	6	70	30	30	20	150	9
2140909	Field Theory	3	2	0	5	70	30	30	20	150	9
2141005	Signals and Systems	3	0	2	5	70	30	30	20	150	9
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	9
	Total	20	2	8	33						

Electronics Engineering (10)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2141001	Microprocessor and Interfacing	3	0	2	5	70	30	30	20	150	10
2141002	Analog Circuit Design	4	0	2	6	70	30	30	20	150	10
2141003	Electronics Measurement and Instrumentation	3	0	2	5	70	30	30	20	150	10
2141004	Control System Engineering	4	0	2	6	70	30	30	20	150	10
2141005	Signals and Systems	3	0	2	5	70	30	30	20	150	10
2141006	Simulation and Design Tools	0	0	2	2	0	0	80	20	100	10
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	10
	Total	17	0	12	32						

Electronics & Communication Engineering (11), Electronics & Telecommunication Engineering (12)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2141001	Microprocessor and Interfacing	3	0	2	5	70	30	30	20	150	11, 12
2141002	Analog Circuit Design	4	0	2	6	70	30	30	20	150	11, 12
2141003	Electronics Measurement and Instrumentation	3	0	2	5	70	30	30	20	150	11, 12
2141004	Control System Engineering	4	0	2	6	70	30	30	20	150	11, 12
2141005	Signals and Systems	3	0	2	5	70	30	30	20	150	11, 12
2141006	Simulation and Design Tools	0	0	2	2	0	0	80	20	100	11, 12
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	11, 12
	Total	17	0	12	32						

Environmental Engineering (13), Environmental Science & Engineering(37)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140003	Engineering Economics and Management	3	0	0	3	70	30	0	0	100	13, 37
2141302	Environmental Sciences II	3	0	4	7	70	30	30	20	150	13, 37
2141305	Ecology and Remote Sensing	3	2	0	5	70	30	30	20	150	13, 37
2141306	Elements of Chemical Engg	3	2	0	5	70	30	30	20	150	13, 37
2141307	Basics of Environmental Hydraulics	3	2	0	5	70	30	30	20	150	13, 37
2141308	Environmental Resources	3	2	0	5	70	30	30	20	150	13, 37
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	13, 37
	Total	18	8	4	33						

Food Processing & Technology (14)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140003	Engineering Economics & Management	3	0	0	3	70	30	0	0	100	14
2141401	Food Nutrition & Biochemistry	3	0	2	5	70	30	30	20	150	14
2141402	Food & Industrial Microbiology	3	0	2	5	70	30	30	20	150	14
2141403	Materials & Manufacture of Food Equipment	4	0	2	6	70	30	30	20	150	14
2141406	Food Engineering Transport Phenomenon	4	0	2	6	70	30	30	20	150	14
2141407	Food Drying & Dehydration	3	0	2	5	70	30	30	20	150	14
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	14
	Total	20	0	10	33						

Industrial Engineering (15)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140003	Engineering Economics and Management	3	0	0	3	70	30	0	0	100	15
2141901	Mechanical Measurement & Metrology	3	0	2	5	70	30	30	20	150	15
2141905	Complex Variables and Numerical Methods	3	2	0	5	70	30	30	20	150	15
2141906	Fluid Mechanics	4	0	2	6	70	30	30	20	150	15
2141907	Machine Design & Industrial Drafting	4	0	2	6	70	30	30	20	150	15
2141908	Manufacturing Processes -II	3	0	2	5	70	30	30	20	150	15
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	15
	Total	20	2	11	33						

Information Technology (16)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140702	Operating System	4	0	2	6	70	30	30	20	150	16
2140705	Object Oriented Programming With C++	4	0	4	8	70	30	30	20	150	16
2140706	Numerical and Statistical Methods for Computer Engineering	3	0	2	5	70	30	30	20	150	16
2140707	Computer Organization	4	1	0	5	70	30	30	20	150	16
2140709	Computer Networks	4	0	2	6	70	30	30	20	150	16
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	16
	Total	19	1	13	33						

Instrumentation & Control Engineering (17)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2141703	Numerical Techniques & Statistical Methods	3	2	0	5	70	30	30	20	150	17
2141708	Control System	4	0	2	6	70	30	30	20	150	17
2141704	Measurement & Instruments	4	0	2	6	70	30	30	20	150	17
2141705	Industrial Measurement I	3	0	2	5	70	30	30	20	150	17
2141706	Analog Signal Processing	4	0	2	6	70	30	30	20	150	17
2141006	Simulation and Design Tools	0	0	2	2	0	0	80	20	100	17
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	17
	Total	18	2	10	33						

Mechanical Engineering (19)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140003	Engineering Economics and Management	3	0	0	3	70	30	0	0	100	19
2141901	Mechanical Measurement & Metrology	3	0	2	5	70	30	30	20	150	19
2141905	Complex Variables and Numerical Methods	3	2	0	5	70	30	30	20	150	19
2141906	Fluid Mechanics	4	0	2	6	70	30	30	20	150	19
2141907	Machine Design & Industrial Drafting	4	0	2	6	70	30	30	20	150	19
2141908	Manufacturing Processes -II	3	0	2	5	70	30	30	20	150	19
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	19
	Total	20	2	11	33						

Mechatronics Engineering (20)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140003	Engineering Economics and Management	3	0	0	3	70	30	0	0	100	20
2141905	Complex Variable and Numerical Methods	3	2	0	5	70	30	30	20	150	20
2142001	Kinematics & Dynamics of Machines	4	0	2	6	70	30	30	20	150	20
2142003	Control Theory	4	0	2	6	70	30	30	20	150	20
2142004	Engineering Thermodynamics	4	1	0	5	70	30	30	20	150	20
2142005	Programming Methodology using C++	3	0	2	5	70	30	30	20	150	20
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	20
	Total	21	3	6	33						

Metallurgy Engineering (21)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140003	Engineering Economics and Management	3	0	0	3	70	30	0	0	100	21
2141907	Machine Design & Industrial Drafting	4	0	2	6	70	30	30	20	150	21
2142102	Principles of Extractive Metallurgy	4	1	0	5	70	30	30	20	150	21
2142105	Heat and Mass Transfer in Metallurgy	4	0	2	6	70	30	30	20	150	21
2142106	Plastic Deformation of Metals	3	1	0	4	70	30	30	20	150	21
2142107	Iron Making	4	0	2	6	70	30	30	20	150	21
2140002	Design Engineering -I B	0	0	3	3	0	0	80	20	100	21
		21	3	6	33						

Mining Engineering (22)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140003	Engineering Economics and Management	3	0	0	3	70	30	0	0	100	22
2142201	Mining Machinery-I	4	0	2	6	70	30	30	20	150	22
2142202	Basic Mine Surveying	2	0	4	6	70	30	30	20	150	22
2142203	Geology-II	3	0	2	5	70	30	30	20	150	22
2142206	Surface Mine Production	3	0	2	5	70	30	30	20	150	22
2140001	Mathematics-4	3	2	0	5	70	30	30	20	150	22
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	22
	Total	18	2	10	33						

Plastic Technology (23)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140003	Engineering Economics and Management	3	0	0	3	70	30	0	0	100	23
2142301	Basic Plastic Processing and Thermal Engineering	3	0	3	6	70	30	30	20	150	23
2142302	Industrial Hydraulics and Pneumatics	3	0	3	6	70	30	30	20	150	23
2142303	Entrepreneurship And Creativity in Plastic Engineering	3	0	2	5	70	30	30	20	150	23
2142305	Applied Mathematics in Plastic Industry	3	2	0	5	70	30	30	20	150	23
2142306	Manufacturing of plastics Material-2	3	0	2	5	70	30	30	20	150	23
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	23
	Total	18	2	10	33						

Power Electronics (24)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140906	AC Machines	4	0	2	6	70	30	30	20	150	24
2140909	Field Theory	3	2	0	5	70	30	30	20	150	24
2141005	Signals and Systems	3	0	2	5	70	30	30	20	150	24
2142404	Basic Power Systems	3	0	0	3	70	30	30	20	150	24
2142405	Analog Electronics and Its Applications	4	0	2	6	70	30	30	20	150	24
2142406	Digital Electronics and its applications	3	0	2	5	70	30	30	20	150	24
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	24
	Total	20	2	8	33						

Production (25)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140003	Engineering Economics and Management	3	0	0	3	70	30	0	0	100	25
2141906	Fluid Mechanics	4	0	2	6	70	30	30	20	150	25
2142503	Metrology and Measurement	3	0	2	5	70	30	30	20	150	25
2142504	Theory of Machines	3	2	0	5	70	30	30	20	150	25
2142505	Probability and Introduction to Statistics	3	2	0	5	70	30	30	20	150	25
2142506	Fundamentals of Machine Design	4	2	0	6	70	30	30	20	150	25
2140002	Design Engineering – I B	0	0	3	3	0	0	80	20	100	25
	Total	20	6	7	33						

Rubber Technology (26)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140003	Engineering Economics and Management	3	0	0	3	70	30	0	0	100	26
2142601	Rubber Compounding Materials	3	0	3	6	70	30	30	20	150	26
2142602	Natural Rubber Science & Technology	3	0	3	6	70	30	30	20	150	26
2142603	Rubber engineering	3	0	2	5	70	30	30	20	150	26
2142605	Latex Technology	3	0	2	5	70	30	30	20	150	26
2142606	Viscoelasticity of Elastomers	3	2	0	5	70	30	30	20	150	26
2140002	Design Engineering -I B	0	0	3	3	0	0	80	20	100	26
		21	3	6	33						

Textile Processing (28)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140003	Engineering Economics and Management	3	0	0	3	70	30	0	0	100	28
2142806	Textile Manufacturing - II	3	0	2	5	70	30	30	20	150	28
2142807	Polymer Chemistry	4	0	2	6	70	30	30	20	150	28
2142808	Scouring & Bleaching - I	4	0	3	7	70	30	30	20	150	28
2142809	Chemistry of Intermediates & Dyes	4	0	0	4	70	30	0	0	100	28
2142810	Process Calculations in Textile Wet Processing	3	2	0	5	70	30	30	20	150	28
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	28
	Total	21	2	7	33						

Textile Technology (29)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140003	Engineering Economics and Management	3	0	0	3	70	30	0	0	100	29
2142901	Yarn Manufacturing - II	4	0	2	6	70	30	30	20	150	29
2142902	Weaving Technology-I	4	0	4	8	70	30	30	20	150	29
2142903	Textile Processing-II	3	0	2	5	70	30	30	20	150	29
2142904	Fibre Physics	3	0	0	3	70	30	0	0	100	29
2142905	Statistical Quality Control & Textile Costing	3	2	0	5	70	30	30	20	150	29
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	29
	Total	20	2	8	33						

Information & Communication Technology (32)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140702	Operating System	4	0	2	6	70	30	30	20	150	32
2140705	Object Oriented Programming With C++	4	0	4	8	70	30	30	20	150	32
2140706	Numerical and Statistical Methods for Computer Engineering	3	0	2	5	70	30	30	20	150	32
2140707	Computer Organization	4	1	0	5	70	30	30	20	150	32
2140709	Computer Networks	4	0	2	6	70	30	30	20	150	32
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	32
	Total	19	1	10	33						

Manufacturing Engineering(34)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140003	Engineering Economic and Management	3	0	0	3	70	30	0	0	100	34
2142504	Theory of Machines	3	2	0	5	70	30	30	20	150	34
2143402	Metrology and Computer Aided Inspection	3	0	2	5	70	30	30	20	150	34
2141906	Fluid Mechanics	4	0	2	6	70	30	30	20	150	34
2142506	Fundamentals of Machine Design	4	2	0	6	70	30	30	20	150	34
2143406	Thermo Dynamics and Thermal Eng.	3	0	2	5	70	30	30	20	150	34
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	34
	Total	20	4	6	33						

Chemical Technology(36)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140003	Engineering Economics & Management	3	0	0	3	70	30	0	0	100	36
2143607	Unit Processes in Organic Synthesis	3	0	3	6	70	30	30	20	150	36
2143608	Mechanical Operations in Chemical Process Industries	3	1	2	6	70	30	30	20	150	36
2143606	Advanced Organic Chemistry for Technologists	3	0	3	6	70	30	30	20	150	36
2143609	Industrial Pollution & Control	3	0	2	5	70	30	30	20	150	36
	Department Elective-II	4	0	0	4	70	30	0	0	100	36
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	36
	Total	19	1	10	33						

Department Elective- II	
Code	**Name of the subject**
2143601	Medicinal Chemistry & Physio-pharmacology
2143602	Rubber Chemistry & Natural Polymers
2143603	Introduction to Glass & Ceramic Technology-II
2143604	Chemistry of Intermediates & Colorants-II

Nano Technology (39)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Tutorial/ Practical		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140001	Mathematics-4	3	2	0	5	70	30	30	20	150	39
2140003	Engineering Economics and Management	3	0	0	3	70	30	0	0	100	39
2143902	Physics of Nanomaterials	3	0	0	3	70	30	0	0	100	39
2143903	Elements of Material Science	3	0	2	5	70	30	30	20	150	39
2143904	Synthesis of Nanomaterials-II	2	0	6	8	70	30	30	20	150	39
2143905	Characterization of Nanomaterials-II	2	0	4	6	70	30	30	20	150	39
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	39
	Total	16	2	12	33						

Environmental Science and Technology (35)

Semester IV w.e.f Jan'15

Subject code	Subject name	Teaching Scheme (Hours)			Credits	Theory Marks		Marks		Total Marks	Branch Code
		Theory	Tutorial	Practical		ESE(E)	PA (M)	Viva (V)	PA(I)		
2140505	Chemical Engineering Maths	3	2	0	5	70	30	30	20	150	35
2140003	Engineering Economics and Management	3	0	0	3	70	30	0	0	100	35
2143505	Chemical Process Technology	3	0	2	5	70	30	30	20	150	35
2143506	Unit Operations-I	4	1	2	7	70	30	30	20	150	35
2143503	Environmental Bioscience	4	0	2	6	70	30	30	20	150	35
2143507	Fundamentals of Stoichiometry	3	1	0	4	70	30	30	20	150	35
2140002	Design Engineering - I B	0	0	3	3	0	0	80	20	100	35
	Total	20	4	6	33						