

# GUJARAT TECHNOLOGICAL UNIVERSITY

## Aeronautical Engineering (01)

### Semester VI

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)		
<a href="#">2160101</a>	Aerodynamics II	4	0	2	6	70	30	30	20	150	1
<a href="#">2160102</a>	Fundamentals of Jet Propulsion	3	1	0	4	70	30	30	20	150	1
<a href="#">2160109</a>	Theory of Vibration	3	0	2	5	70	30	30	20	150	1
<a href="#">2160104</a>	Basic Control Theory	3	0	2	5	70	30	30	20	150	1
<a href="#">2160106</a>	Avionics	3	0	2	5	70	30	30	20	150	1
<a href="#">2160110</a>	Aviation Meteorology, Navigation and Communication	0	0	2	2	0	0	80	20	100	1
	Department Elective I	2	0	0	2	70	30	0	0	100	1
<a href="#">2160001</a>	Design Engineering - II B	0	0	3	3	0	0	80	20	100	1
	<b>Total</b>	18	1	13	32						

### Departmental Elective I:

<a href="#">2160107</a>	Airport and Operations Management
<a href="#">2160108</a>	Aviation Management

## Automobile Engineering (02)

### Semester VI

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)		
<a href="#">2160207</a>	Alternative fuel and power systems	3	0	2	5	70	30	30	20	150	2
<a href="#">2161903</a>	Computer Aided Design	3	0	2	5	70	30	30	20	150	2
<a href="#">2161908</a>	Refrigeration and Air Conditioning	3	0	2	5	70	30	30	20	150	2
<a href="#">2160205</a>	Automobile Chassis and Body Engineering	3	0	0	3	70	30	0	0	100	2
<a href="#">2160208</a>	Automotive computer controlled Systems	3	0	2	5	70	30	30	20	150	2
<a href="#">2161901</a>	Dynamics of Machinery	3	0	2	5	70	30	30	20	150	2
<a href="#">2160001</a>	Design Engineering - II B	0	0	3	3	0	0	80	20	100	2
	<b>Total</b>	18	0	13	31						

**Bio-Medical(03)**

**Semester VI**

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)		
<a href="#">2160301</a>	Diagnostic Instrumentation	4	0	2	6	70	30	30	20	150	3
<a href="#">2160307</a>	Embedded system Design	4	0	2	6	70	30	30	20	150	3
<a href="#">2160303</a>	Therapeutic Techniques & Instrumentation	4	0	2	6	70	30	30	20	150	3
<a href="#">2160308</a>	Biomechanics	3	2	0	5	70	30	30	20	150	3
	Department Elective - I	3	0	2	5	70	30	30	20	150	3
<a href="#">2160001</a>	Design Engineering - II B	0	0	3	3	0	0	80	20	100	3
	<b>Total</b>	18	2	11	31						

**Departmental Elective I:**

<a href="#">2160309</a>	Introduction to Issue Engineering
<a href="#">2160310</a>	Rehabilitation Engineering

**Bio-Technology(04)**

**Semester VI**

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)		
<a href="#">2160409</a>	Nano-Biotechnology - Department Elective I	3	2	0	5	70	30	30	20	150	4
<a href="#">2160410</a>	Bioinformatics - Department Elective I	3	0	2	5	70	30	30	20	150	4
<a href="#">2160401</a>	Advanced Molecular Biology-II	3	0	0	3	70	30	0	0	100	4
<a href="#">2160407</a>	Instrumentation and Control for Bioengineering	4	0	3	7	70	30	30	20	150	4
<a href="#">2160405</a>	Principles of Process Engineering-III	3	0	3	6	70	30	30	20	150	4
<a href="#">2160408</a>	Agriculture and Food Biotechnology	3	0	3	6	70	30	30	20	150	4
<a href="#">2160001</a>	Design Engineering-II B	0	0	3	3	0	0	80	20	100	4
	<b>Total</b>	19	2	14	35						

**Chemical Engineering (05)**

**Semester VI**

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)		
<a href="#">2160501</a>	Mass Transfer Operation - II	3	0	3	6	70	30	30	20	150	5
<a href="#">2160503</a>	Process Equipment Design -I	4	0	3	7	70	30	30	20	150	5
<a href="#">2160504</a>	Pollution Control, Safety & Health Management	3	0	0	3	70	30	0	0	100	5
<a href="#">2160506</a>	Chemical Reaction Engineering - I	3	0	3	6	70	30	30	20	150	5
	Department Elective - I	4	0	2	6	70	30	30	20	150	5
<a href="#">2160001</a>	Design Engineering - II B	0	0	3	3	0	0	80	20	100	5
	<b>Total</b>	17	0	14	31						

**Departmental Elective I**

<a href="#">2160507</a>	Advance Separation Techniques
<a href="#">2160508</a>	Biochemical Engineering
<a href="#">2160509</a>	Biotechnology

**Civil Engineering (06)**

**Semester VI**

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)		
<a href="#">2160601</a>	Advanced Construction and Equipments	3	1	0	4	70	30	30	20	150	6
<a href="#">2160602</a>	Applied Fluid Mechanics	3	0	2	5	70	30	30	20	150	6
<a href="#">2160603</a>	Railway, Bridge & Tunnel Engineering	3	1	0	4	70	30	30	20	150	6
<a href="#">2160604</a>	Water & Waste Water Engineering	3	0	2	5	70	30	30	20	150	6
<a href="#">2160607</a>	Elementary Structural Design	4	1	0	5	70	30	30	20	150	6
	Departmental Elective - I	3	1	0	4	70	30	30	20	150	6
<a href="#">2160001</a>	Design Engineering - II B	0	0	3	3	0	0	80	20	100	6
	<b>Total</b>	19	4	7	30						

**Departmental Elective I:**

<a href="#">2160608</a>	Urban Transportation system
<a href="#">2160609</a>	Computational Mechanics



**Electrical Engineering (09)**

**Semester VI**

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)		
<a href="#">2160902</a>	Power Electronics – II	3	0	2	5	70	30	30	20	150	9
<a href="#">2160912</a>	Design of DC Machines and Transformer	3	0	2	5	70	30	30	20	150	9
<a href="#">2160904</a>	High Voltage Engineering	3	0	2	5	70	30	30	20	150	9
<a href="#">2160907</a>	Utilization of Electrical Energy and Traction	3	0	0	3	70	30	0	0	100	9
<a href="#">2160908</a>	Electrical Power system – II	3	0	2	5	70	30	30	20	150	9
	Departmental Elective - I	3	0	2	5	70	30	30	20	150	9
<a href="#">2160001</a>	Design Engineering - II B	0	0	3	3	0	0	80	20	100	9
	<b>Total</b>	18	0	13	31						
<b>Departmental Elective I:</b>											
<a href="#">2160909</a>	Advance Microcontrollers										
<a href="#">2160913</a>	Control of Electrical Drives										
<a href="#">2160911</a>	Computer Aided Analysis and Design for Electrical Engg.										

**Electronics Engineering (10)**

**Semester VI**

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)		
<a href="#">2161001</a>	Digital Communication	4	0	2	6	70	30	30	20	150	10
<a href="#">2161003</a>	Antenna & Wave Propagation	4	0	2	6	70	30	30	20	150	10
<a href="#">2161006</a>	Power Electronics Devices and Circuits	3	0	2	5	70	30	30	20	150	10
<a href="#">2161007</a>	Digital Control	4	0	2	6	70	30	30	20	150	10
	Departmental Elective - I	4	0	2	6	70	30	30	20	150	10
<a href="#">2160001</a>	Design Engineering - II B	0	0	3	3	0	0	80	20	100	10
	<b>Total</b>	19	0	13	32						
<b>Departmental Elective I:</b>											
<a href="#">2161005</a>	Optical Communication										
<a href="#">2161004</a>	VLSI Design										
<a href="#">2161008</a>	Optoelectronics										
<a href="#">2161009</a>	Telecommunication Switching and Applications										



**Food Processing & Technology (14)**

**Semester VI**

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)		
<a href="#">2161401</a>	Food Process Equipment Design	4	2	0	6	70	30	30	20	150	14
<a href="#">2161403</a>	Food Engineering Operations - II	4	0	2	6	70	30	30	20	150	14
<a href="#">2161406</a>	Food Refrigeration & Air - Conditioning	4	0	2	6	70	30	30	20	150	14
<a href="#">2161409</a>	Bakery and Confectionary Technology	4	0	2	6	70	30	30	20	150	14
	Department Elective-I	4	0	2	6	70	30	30	20	150	14
<a href="#">2160001</a>	Design Engineering - II B	0	0	3	3	0	0	80	20	100	14
	<b>Total</b>	20	2	11	33						

**Departmental Elective I:**

<a href="#">2161408</a>	Food Fermentation Technology
<a href="#">2161407</a>	Food Plant Utilities & Sanitation

**Industrial Engineering (15)**

**Semester VI**

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)		
<a href="#">2161501</a>	Materials Management	4	0	2	6	70	30	30	20	150	15
<a href="#">2161502</a>	Product Development & Value Engineering	4	0	2	6	70	30	30	20	150	15
<a href="#">2161503</a>	Finance Management & Cost Control	4	2	0	6	70	30	30	20	150	15
<a href="#">2161504</a>	Metal Cutting & Advanced manufacturing processes	4	0	2	6	70	30	30	20	150	15
	Departmental Elective - I	4	0	2	6	70	30	30	20	150	15
<a href="#">2160001</a>	Design Engineering - II B	0	0	3	3	0	0	80	20	100	15
	<b>Total</b>	20	2	11	33						

**Departmental Elective I**

<a href="#">2161505</a>	Maintenance & Safety Engg
<a href="#">2161506</a>	Total Productive Maintenance

**Information Technology (16)**

**Semester VI**

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)		
<a href="#">2160701</a>	Software Engineering	4	0	2	6	70	30	30	20	150	16
<a href="#">2160707</a>	Advanced Java	4	0	2	6	70	30	30	20	150	16
<a href="#">2160708</a>	Web Technology	3	0	2	5	70	30	30	20	150	16
<a href="#">2161603</a>	Data Compression and data Retrieval	3	0	2	5	70	30	30	20	150	16
	Departmental Elective - I	4	0	2	6	70	30	30	20	150	16
<a href="#">2160001</a>	Design Engineering - II B	0	0	3	3	0	0	80	20	100	16
	<b>Total</b>	18	0	13	31						

**Departmental Elective I**

<a href="#">2161604</a>	Image processing
<a href="#">2160709</a>	Embedded & VLSI Design
<a href="#">2160710</a>	Distributed operating system
<a href="#">2160711</a>	.Net Technology

**Instrumentation & Control Engineering (17)**

**Semester VI**

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)		
	Departmental Elective - I	4	0	2	6	70	30	30	20	150	17
<a href="#">2161707</a>	Control System Design	4	0	2	6	70	30	30	20	150	17
<a href="#">2161708</a>	Power Electronics	3	0	2	5	70	30	30	20	150	17
<a href="#">2161704</a>	Analog and Digital communication	3	0	2	5	70	30	30	20	150	17
<a href="#">2161709</a>	Programmable Logic Controller	4	0	2	6	70	30	30	20	150	17
<a href="#">2160001</a>	Design Engineering - II B	0	0	3	3	0	0	80	20	100	17
	<b>Total</b>	18	0	13	31						

**Departmental Elective I:**

<a href="#">2161711</a>	Environmental Instrumentation
<a href="#">2161712</a>	Bio-Potential Instrumentation



**Mechanical Engineering (19)**

**Semester VI**

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)		
<a href="#">2161901</a>	Dynamics of Machinery	3	0	2	5	70	30	30	20	150	19
<a href="#">2161902</a>	Internal Combustion Engines	3	0	2	5	70	30	30	20	150	19
<a href="#">2161903</a>	Computer Aided Design	3	0	2	5	70	30	30	20	150	19
<a href="#">2161907</a>	Industrial Engineering	3	0	2	5	70	30	30	20	150	19
<a href="#">2161908</a>	Refrigeration and Airconditioning	3	0	2	5	70	30	30	20	150	19
<a href="#">2161909</a>	Production Technology	3	0	2	5	70	30	30	20	150	19
<a href="#">2160001</a>	Design Engineering - II B	0	0	3	3	0	0	80	20	100	19
	<b>Total</b>	18	0	15	33						

**Mechatronics Engineering (20)**

**Semester VI**

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)		
<a href="#">2162003</a>	Control of Electric Drives	4	0	2	6	70	30	30	20	150	20
<a href="#">2162004</a>	Hydraulic & Pneumatic Systems	4	0	2	6	70	30	30	20	150	20
<a href="#">2162005</a>	Electro Mechanical Measurements & Instruments	4	0	2	6	70	30	30	20	150	20
<a href="#">2162001</a>	Design of Mechanisms - I	4	0	2	6	70	30	30	20	150	20
	Departmental Elective - I	3	0	2	5	70	30	30	20	150	20
<a href="#">2160001</a>	Design Engineering - II B	0	0	3	3	0	0	80	20	100	20
	<b>Total</b>	19	0	13	32						

**Departmental Elective I**

<a href="#">2162006</a>	Computer Aided Design for Mechatronics
<a href="#">2162007</a>	Metrology and Product Engineering
<a href="#">2161907</a>	Industrial Engineering

**Metallurgy Engineering (21)**

**Semester VI**

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)		
<a href="#">2162103</a>	Powder Metallurgy	4	0	2	6	70	30	30	20	150	21
<a href="#">2162106</a>	Foundry Technology	4	0	2	6	70	30	30	20	150	21
<a href="#">2162107</a>	Heat Treatment	4	0	2	6	70	30	30	20	150	21
<a href="#">2162108</a>	Material Degradation and Prevention	4	0	2	6	70	30	30	20	150	21
<a href="#">2162109</a>	Metal Joining Processes	4	0	2	6	70	30	30	20	150	21
<a href="#">2160001</a>	Design Engineering -II B	0	0	3	3	0	0	80	20	100	21
	<b>Total</b>	20	0	13	33						

**Mining Engineering (22)**

**Semester VI**

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)		
<a href="#">2162202</a>	Underground Metal Mining	4	0	2	6	70	30	30	20	150	22
<a href="#">2162204</a>	Mine Hazards	3	0	2	5	70	30	30	20	150	22
<a href="#">2162205</a>	Mine Surface Environment	4	0	2	6	70	30	30	20	150	22
<a href="#">2162206</a>	Computer Application Mining	2	0	0	2	70	30	0	0	100	22
<a href="#">2162207</a>	Mine Ventilation	3	0	2	5	70	30	30	20	150	22
	Departmental Elective - I	4	0	2	6	70	30	30	20	150	22
<a href="#">2160001</a>	Design Engineering - II B	0	0	3	3	0	0	80	20	100	22
	<b>Total</b>	20	0	13	33						

**Departmental Elective I**

<a href="#">2162201</a>	Ecology Geology-I
<a href="#">2162208</a>	Minine Electrical Engineering

**Plastic Technology (23)**

**Semester VI**

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)		
<a href="#">2162303</a>	Plastic Process Instrumentation and Process Control	3	0	2	5	70	30	30	20	150	23
<a href="#">2162306</a>	Seminar-2	0	0	4	4	0	0	80	20	100	23
<a href="#">2162307</a>	Testing and Identification of Plastic Materials	3	0	2	5	70	30	30	20	150	23
<a href="#">2162308</a>	Advance Plastics Processing	3	0	2	5	70	30	30	20	150	23
<a href="#">2162304</a>	Polymer reaction engineering and Rheology	3	0	2	5	70	30	30	20	150	23
	Departmental Elective - I	3	0	3	6	70	30	30	20	150	23
<a href="#">2160001</a>	Design Engineering - II B	0	0	3	3	0	0	80	20	100	23
	<b>Total</b>	15	0	18	33						
<b>Departmental Elective I:</b>											
<a href="#">2162310</a>	Plastic Packaging Technology										
<a href="#">2162311</a>	Biopolymers										

**Power Electronics (24)**

**Semester VI**

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)		
<a href="#">2162408</a>	Simulation Tools	0	0	2	2	0	0	80	20	100	24
<a href="#">2162404</a>	Industrial Drives & Control-I	4	0	2	6	70	30	30	20	150	24
<a href="#">2162406</a>	Power Electronics Practice-II	0	0	4	4	0	0	80	20	100	24
<a href="#">2162407</a>	Electrical Power Utilization & Traction	4	0	0	4	70	30	0	0	100	24
<a href="#">2162409</a>	Power Electronic Circuits – II	4	0	2	6	70	30	30	20	150	24
	Dept. Elective – I	4	0	2	6	70	30	30	20	150	24
<a href="#">2160001</a>	Design Engineering - II B	0	0	3	3	0	0	80	20	100	24
	<b>Total</b>	16	0	15	31						
<b>Departmental Elective I:</b>											
<a href="#">2162410</a>	Industrial Communication System										
<a href="#">2162411</a>	High Voltage Engineering (Power Electronics)										
<a href="#">2162412</a>	Programmable Logic Devices & Applications										

**Production (25)**

**Semester VI**

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)		
<a href="#">2162506</a>	Metal Joining Technology	4	0	2	6	70	30	30	20	150	25
<a href="#">2161903</a>	Computer Aided Design	3	0	2	5	70	30	30	20	150	25
<a href="#">2162507</a>	Allied Manufacturing Technique	4	0	2	6	70	30	30	20	150	25
<a href="#">2162508</a>	Metal Forming Technology	4	0	2	6	70	30	30	20	150	25
	Departmental Elective - I	3	1	0	4	70	30	30	20	150	25
<a href="#">2160001</a>	Design Engineering II B	0	0	3	3	0	0	80	20	100	25
	<b>Total</b>	18	1	11	30						

**Departmental Elective I:**

<a href="#">2162509</a>	Plant Maintenance and Safety Engg.
<a href="#">2162505</a>	Estimating and Costing

**Rubber technology (26)**

**Semester VI**

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)		
<a href="#">2162601</a>	Rubber Compound & Product Testing	3	0	3	6	70	30	30	20	150	26
<a href="#">2162602</a>	Synthetic Rubbers	3	0	3	6	70	30	30	20	150	26
<a href="#">2162603</a>	Rubber Equipment Design-I	3	0	3	6	70	30	30	20	150	26
<a href="#">2162604</a>	Characterisation of Rubber	3	0	3	6	70	30	30	20	150	26
	Departmental Elective - I	3	0	3	6	70	30	30	20	150	26
<a href="#">2160001</a>	Design Engineering-II B	0	0	3	3	0	0	80	20	100	26
	<b>Total</b>	15	0	18	33						

**Departmental Elective I:**

<a href="#">2162605</a>	Thermoplastics Elastomers & Polymer Blends
<a href="#">2162606</a>	Corrosion of Polymers & Elastomers

**Textile Processing (28)**

**Semester VI**

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)		
<a href="#">2162801</a>	Technology of Dyeing - II	3	0	2	5	70	30	30	20	150	28
<a href="#">2162802</a>	Analytical Textile Chemistry -II	3	0	2	5	70	30	30	20	150	28
<a href="#">2162804</a>	Technology of Printing - I	3	0	3	6	70	30	30	20	150	28
<a href="#">2162805</a>	Technology of Finishing - I	3	0	2	5	70	30	30	20	150	28
<a href="#">2162806</a>	Physical Characteristics of textile fibre	3	0	0	3	70	30	0	0	100	28
	Department Elective I	3	0	2	5	70	30	30	20	150	28
<a href="#">2160001</a>	Design Engineering - II B	0	0	3	3	0	0	80	20	100	28
	<b>Total</b>	18	0	14	32						

**Departmental Elective I:**

<a href="#">2162807</a>	Chemical & Physical Analysis of Textiles
<a href="#">2162808</a>	Manufacturing & Applications of Polymeric Materials

**Textile Technology (29)**

**Semester VI**

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)		
<a href="#">2162903</a>	Physical Testing-II	3	0	2	5	70	30	30	20	150	29
<a href="#">2162904</a>	Technical Textile-I	3	2	0	5	70	30	30	20	150	29
<a href="#">2162906</a>	Fabric Structure-II	4	0	2	6	70	30	30	20	150	29
<a href="#">2162907</a>	Weaving Technology-III	3	0	2	5	70	30	30	20	150	29
<a href="#">2162908</a>	Modern Yarn Production Technologies	3	0	0	3	70	30	0	0	100	29
	Departmental Elective - I -	3	0	2	5	70	30	30	20	150	29
<a href="#">2160001</a>	Design Engineering - II B	0	0	3	3	0	0	80	20	100	29
	<b>Total</b>	19	2	11	32						

**Departmental Elective I:**

<a href="#">2162909</a>	Knitting Technology
<a href="#">2162910</a>	Woolen and Worsted Spinning

**Information & Communication Technology (32)**

**Semester VI**

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)		
<a href="#">2163206</a>	Analog and Digital Communication (ICT)	4	0	2	6	70	30	30	20	150	32
<a href="#">2163201</a>	Operation Research	4	0	2	6	70	30	30	20	150	32
<a href="#">2160708</a>	Web Technology	3	0	2	5	70	30	30	20	150	32
<a href="#">2163203</a>	Engineering Electromagnetics & wave Propagation	4	0	2	6	70	30	30	20	150	32
	Departmental Elective - I	4	0	2	6	70	30	30	20	150	32
<a href="#">2160001</a>	Design Engineering - II B	0	0	3	3	0	0	80	20	100	32
	<b>Total</b>	19	0	13	32						

**Departmental Elective I**

<a href="#">2161005</a>	Optical Communication
<a href="#">2163204</a>	Telecommunication Engineering
<a href="#">2163205</a>	Advance N/w Protocols

**Manufacturing Engineering(34)**

**Semester VI**

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)		
<a href="#">2162506</a>	Metal Joining Technology	4	0	2	6	70	30	30	20	150	34
<a href="#">2161903</a>	Computer Aided Design	3	0	2	5	70	30	30	20	150	34
<a href="#">2161907</a>	Industrial Engineering	3	0	2	5	70	30	30	20	150	34
<a href="#">2162508</a>	Metal Forming Technology	4	0	2	6	70	30	30	20	150	34
	Departmental Elective - I	3	1	0	4	70	30	30	20	150	34
<a href="#">2160001</a>	Design Engineering II B	0	0	3	3	0	0	80	20	100	34
	<b>Total</b>	17	1	11	29						

**Departmental Elective I**

<a href="#">2162509</a>	Plant Maintenance and Safety Engg.
<a href="#">2163407</a>	Plastic Manufacturing Technology



**Departmental Elective VI**

<a href="#">2163605</a>	Technology of Solid Dosage forms & Medicinal Natural Products
<a href="#">2163606</a>	Compounding & Processing of Plastics & Rubbers-II
<a href="#">2163607</a>	Ceramic Coatings
<a href="#">2163608</a>	Technology of Dyeing

**Nano Technology (39)****Semester VI**

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)		
<a href="#">2163901</a>	Coating technology	3	0	2	5	70	30	30	20	150	39
<a href="#">2163902</a>	Nanopolymers and Nano-composites	3	0	2	5	70	30	30	20	150	39
<a href="#">2163903</a>	Nanotechnology and Medicine	3	0	0	3	70	30	0	0	100	39
<a href="#">2163904</a>	Non-conventional energy sources	4	0	0	4	70	30	0	0	100	39
<a href="#">2163905</a>	Microelectronics and VLSI	3	0	2	5	70	30	30	20	150	39
	Departmental Elective I	3	0	2	5	70	30	30	20	150	39
<a href="#">2160001</a>	Design Engineering - II B	0	0	3	3	0	0	80	20	100	39
	<b>Total</b>	19	0	11	30						
	<b>Departmental Elective I</b>										
<a href="#">2163906</a>	Nanomagnetism and NanoFluids										

**Civil and Infrastructure (40)****Semester VI**

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)		
<a href="#">2164001</a>	Design of Concrete Structures	3	2	0	5	70	30	30	20	150	40
<a href="#">2164002</a>	Utilities for Civil Infrastructure	3	2	0	5	70	30	30	20	150	40
<a href="#">2164003</a>	Geotechnical Engineering - II	3	0	2	5	70	30	0	0	100	40
<a href="#">2164004</a>	Infrastructure Planning and Appraisal	3	1	0	4	70	30	30	20	150	40
	Departmental Elective - I	3	2	0	5	70	30	30	20	150	40
<a href="#">2164005</a>	Industry Internship-2	0	0	2	2	0	0	80	20	100	40
<a href="#">2160001</a>	Design Engg. II-B	0	0	3	3	0	0	80	20	100	40
	<b>Total</b>	15	7	7	29						



<b>Departmental Elective I</b>		<b>Theory</b>	<b>Tutorial</b>	<b>Practical</b>	<b>Credits</b>
<a href="#">2164006</a>	Advanced Construction Methods & Equipments	3	2	0	5
<a href="#">2164007</a>	Construction Safety and Material Management	3	2	0	5
<a href="#">2164008</a>	Highway Planning & Construction	3	2	0	5
<a href="#">2164009</a>	GIS & Remote Sensing for Infrastructure	3	2	0	5
<a href="#">2164010</a>	Water & Wastewater Treatment Technologies	3	0	2	5