

# GUJARAT TECHNOLOGICAL UNIVERSITY

## Aeronautical Engineering (01)

### 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)		
2160101	Aerodynamics II	4	1	0	5	70	30	30	20	150	1
2160102	Fundamentals of Jet Propulsion	4	1	0	5	70	30	30	20	150	1
2160103	Vibration and Noise Control	4	0	2	6	70	30	30	20	150	1
2160104	Basic Control Theory	3	0	2	5	70	30	30	20	150	1
2160106	Avionics	3	0	2	5	70	30	30	20	150	1
	Department Elective I	4	0	0	4	70	30	0	0	100	1
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	22	2	9	33						

### Departmental Elective I:

2160107	Aeroelasticity
2160108	Air Traffic Control and Planning

## Automobile Engineering (02)

### 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)		
2160201	Automobile Component Design	4	0	2	6	70	30	30	20	150	2
2160203	Transport Management and Laws	4	0	0	4	70	30	0	0	100	2
2160204	Vehicle Maintenance and Garage Practice	2	0	4	6	70	30	30	20	150	2
2160205	Automobile Chassis and Body Engineering	3	0	0	3	70	30	0	0	100	2
2160207	Automotive computer controlled systems	3	0	2	5	70	30	30	20	150	2
2160208	Automotive Electrical & Electronics	3	0	2	5	70	30	30	20	150	2
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	19	0	13	32						

**Bio-Technology(04)**

**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)		
2160404	Instrumentation and Control for Bioengineering	3	0	3	6	70	30	30	20	150	4
2160405	Principles of Process Engineering-III	3	0	3	6	70	30	30	20	150	4
2160407	Biostatistics	2	0	0	2	70	30	0	0	100	4
2160408	Agriculture and Food Biotechnology	3	0	2	5	70	30	30	20	150	4
2160409	Enzymes and Proteins	3	0	2	5	70	30	30	20	150	4
	Department Elective I	4	0	2	6	70	30	30	20	150	4
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	18	0	15	33						

**Departmental Elective I**

2160410	Environmental BioTechnology
2160411	Bioinformatics

**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)		
2160501	Mass Transfer Operation - II	3	0	3	6	70	30	30	20	150	5
2160503	Process Equipment Design -I	4	0	3	7	70	30	30	20	150	5
2160504	Pollution Control, Safety & Health Management	3	0	2	5	70	30	30	20	150	5
2160506	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
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	17	0	16	33						

**Departmental Elective I**

2160507	Advance Separation Techniques
2160508	Biochemical Engineering
2160509	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)		
2160601	Advance Construction & Equipments	3	1	0	4	70	30	30	20	150	6
2160602	Advanced Fluid Mechanics	3	0	2	5	70	30	30	20	150	6
2160603	Railway, Bridge & Tunnel Engineering	3	1	0	4	70	30	30	20	150	6
2160604	Water & Waste Water Engineering	3	0	2	5	70	30	30	20	150	6
2160607	Elementary Structural Design	4	2	0	6	70	30	30	20	150	6
	Departmental Elective - I	4	2	0	6	70	30	30	20	150	6
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	20	6	7	33						

**Departmental Elective I:**

2160608	Urban Transportation system
2160609	Computational Mechanics

**Computer Engineering (07), Computer Science & Engineering (31)****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)		
2160701	Software Engineering	4	0	2	6	70	30	30	20	150	7
2160707	Mobile Computing and Wireless Communication	4	0	2	6	70	30	30	20	150	7
2160704	Theory of Computation	4	0	2	6	70	30	30	20	150	7

2160708	Web Technology	4	0	2	6	70	30	30	20	150	7
	Departmental Elective I	4	0	2	6	70	30	30	20	150	7
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	20	0	13	33						

Departmental Elective I	
2160709	Image processing
2160710	Embedded & VLSI Design
2160711	Distributed operating system
2160712	ERP

### Electrical & Electronics Engineering (08)

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)		
2160807	Digital Control System	3	0	2	5	70	30	30	20	150	8
2160902	Power Electronics – II	3	0	2	5	70	30	30	20	150	8
2160903	Microprocessor and Microcontroller Architecture & Interfacing	4	0	2	6	70	30	30	20	150	8
2160907	Utilization of Electrical Energy and Traction	4	0	0	4	70	30	30	20	150	8
2160908	Electrical Power system – II	3	0	2	5	70	30	30	20	150	8
	Departmental Elective - I	3	0	2	5	70	30	30	20	150	8
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	20	0	13	33						

Departmental Elective I:	
	Digital Signal Processing
	Electrical Drives Control
	Robotics Programming and Applications
	Fundamentals of Image Processing
	Biomedical Instrumentation

### Electrical Engineering (09)

#### 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)		
2160902	Power Electronics – II	3	0	2	5	70	30	30	20	150	9
2160903	Microprocessor and Microcontroller Architecture & Interfacing	4	0	2	6	70	30	30	20	150	9
2160904	High Voltage Engineering	3	0	2	5	70	30	30	20	150	9
2160907	Utilization of Electrical Energy and Traction	4	0	0	4	70	30	0	0	100	9
2160908	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
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	20	0	13	33						

#### Departmental Elective I:

2160909	Digital Signal Processing
2160910	Materials in Electrical System
2160911	Electrical Drives Control
2160912	Computer Aided Analysis and Design for Electrical Engg.

### Electronics Engineering (10)

#### 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)		
2161001	Digital Communication	4	0	2	6	70	30	30	20	150	10
2161003	Antenna & Wave Propagation	4	0	2	6	70	30	30	20	150	10
2161006	Power Electronics Devices and Circuits	3	0	2	5	70	30	30	20	150	10
2161007	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
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	19	0	13	32						

**Departmental Elective I:**

2161005	Optical Communication
2161004	VLSI Design
2161008	Optoelectronics
2161009	Telecommunication Switching and Applications

**Electronics & Communication Engineering (11), Electronics & Telecommunication Engineering (12)****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)		
2161001	Digital Communication	4	0	2	6	70	30	30	20	150	11
2161003	Antenna & Wave Propagation	4	0	2	6	70	30	30	20	150	11
2161005	Optical Communication	4	0	2	6	70	30	30	20	150	11
2161101	VLSI Technology & Design	4	0	2	6	70	30	30	20	150	11
	Departmental Elective - I	4	0	2	6	70	30	30	20	150	11
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	20	0	13	33						

**Departmental Elective I:**

2161102	Advanced Microprocessor
2161006	Power Electronics Devices and Circuits
2161103	Data Communication & Networking

**Environmental Engineering (13), Environmental Science & Engineering(37)****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)		
2161302	Fundamentals of Air Pollution	3	0	2	5	70	30	30	20	150	13
2161304	Biological Processes for Wastewater Treatment	4	2	0	6	70	30	30	20	150	13
2161305	Occupational Health and Safety	3	4	0	7	70	30	30	20	150	13

2161306	Design of Water Treatment Plants	4	2	0	6	70	30	30	20	150	13
	Departmental Elective - I	4	2	0	6	70	30	30	20	150	13
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	18	10	5	33						

**Departmental Elective I:**

2161303	Estimating, Specifications & Project Management
2161607	Ground Water Contamination

**Food Processing & Technology (14)**

**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)		
2161401	Food Process Equipment Design	4	2	0	6	70	30	30	20	150	14
2161403	Food Engineering Operations - II	4	0	2	6	70	30	30	20	150	14
2161406	Food Refrigeration & Air - Conditioning	4	0	2	6	70	30	30	20	150	14
2161407	Food Plant Utilities & Sanitation	4	0	2	6	70	30	30	20	150	14
	Department Elective-I	4	0	2	6	70	30	30	20	150	14
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	20	2	11	33						

**Departmental Elective I:**

2161408	Food Fermentation Technology
2161409	Bakery and Confectionary Technology

**Information Technology (16)**

**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)		
2160701	Software Engineering	4	0	2	6	70	30	30	20	150	16
2160707	Mobile Computing and Wireless Communication	4	0	2	6	70	30	30	20	150	16

2160708	Web Technology	4	0	2	6	70	30	30	20	150	16
2161603	Data Compression and data Retrieval	4	0	2	6	70	30	30	20	150	16
	Departmental Elective - I	4	0	2	6	70	30	30	20	150	16
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	20	0	13	33						

<b>Departmental Elective I</b>	
2160709	Image processing
2160710	Embedded & VLSI Design
2160711	Distributed operating system
2160712	ERP

### Instrumentation & Control Engineering (17)

#### 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)		
2161704	Analog and Digital communication	3	0	2	5	70	30	30	20	150	17
2161705	Industrial Measurement II	4	0	2	6	70	30	30	20	150	17
2161706	Practices of Instrumentation Standards	0	0	2	2	0	0	100	50	150	17
2161707	Control Systems Design	4	0	2	6	70	30	30	20	150	17
2161708	Programmable Logic Controller	3	0	2	5	70	30	30	20	150	17
	Departmental Elective - I	4	0	2	6	70	30	30	20	150	17
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	18	0	15	33						

<b>Departmental Elective I:</b>	
2161708	Embedded System Design
2161709	Biomedical Instrumentation



**Mechanical Engineering (19)**

**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)		
2161901	Dynamics of Machinery	3	0	2	5	70	30	30	20	150	19
2161902	Internal Combustion Engines	3	0	2	5	70	30	30	20	150	19
2161905	Control Engineering	3	0	2	5	70	30	30	20	150	19
2161907	Industrial Engineering	3	0	2	5	70	30	30	20	150	19
2161909	Refrigeration and Airconditioning	3	0	2	5	70	30	30	20	150	19
2191908	Computer Integrated Manufacturing	3	0	2	5	70	30	30	20	150	19
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
<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)		
2162003	Control of Electric Drives	4	0	2	6	70	30	30	20	150	20
2162004	Hydraulic & Pneumatic Systems	4	0	2	6	70	30	30	20	150	20
2162005	Electro Mechanical Measurements & Instruments	4	0	2	6	70	30	30	20	150	20
2162006	Manufacturing Technology - I	4	0	2	6	70	30	30	20	150	20
	Departmental Elective - I	4	0	2	6	70	30	30	20	150	20
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
<b>Total</b>		20	0	13	33						

**Departmental Elective I**

2162007	Computer Aided Design for Mechatronics
2162008	MEMS & Nanotechnology

**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)		
2162202	Underground Metal Mining	4	0	2	6	70	30	30	20	150	22
2162204	Mine Hazards	3	0	2	5	70	30	30	20	150	22
2162205	Mine Surface Environment	4	0	2	6	70	30	30	20	150	22
2162206	Computer Application Mining	2	0	0	2	70	30	0	0	100	22
2162207	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
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	20	0	13	33						

**Departmental Elective I**

2162201	Ecology Geology-I
2162208	Minine Electrical Engineering

**Plastic Technology (23)**

**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)		
2162303	Plastic Process Instrumentation and Process Control	3	0	2	5	70	30	30	20	150	23
2162306	Seminar-2	0	0	4	4	0	0	100	50	150	23
2162307	Advanced Plastics Testing	3	0	2	5	70	30	30	20	150	23
2162308	Advance Plastics Processing	3	0	2	5	70	30	30	20	150	23
2162309	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
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1

	<b>Total</b>	15	0	18	33						
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<b>Departmental Elective I:</b>	
2162310	Plastic Packaging Technology
2162311	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)		
2160903	Microprocessor and Microcontroller Architecture & Interfacing	4	0	2	6	70	30	30	20	150	24
2162404	Industrial Drives & Control-1	4	0	2	6	70	30	30	20	150	24
2162405	Power Electronic Circuits – II	4	0	2	6	70	30	30	20	150	24
2162406	Power Electronics Practice-II	0	0	2	2	0	0	100	50	150	24
2162407	Electrical Power Utilization & Traction	4	0	0	4	70	30	0	0	100	24
	Dept. Elective – I	4	0	2	6	70	30	30	20	150	24
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	20	0	13	33						

<b>Departmental Elective I:</b>	
2162408	Industrial Communication System
2162409	High Voltage Engineering
2162410	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)		
2162506	Quality Management & Reliability Engineering	3	1	0	4	70	30	30	20	150	25
2162507	Machine Tool Design	4	0	2	6	70	30	30	20	150	25

2162508	Computer Aided Design and Analysis	4	0	2	6	70	30	30	20	150	25
2162509	Production & Operations Management	4	1	0	5	70	30	30	20	150	25
2162510	Solid Modeling	0	0	4	4					0	25
	Departmental Elective I	4	1	0	5	70	30	30	20	150	25
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	19	3	11	33						

### Textile Processing (28)

#### 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)		
2162801	Technology of Dyeing - II	3	0	2	5	70	30	30	20	150	28
2162802	Analytical Textile Chemistry -II	3	0	2	5	70	30	30	20	150	28
2162804	Technology of Printing - I	3	0	3	6	70	30	30	20	150	28
2162805	Technology of Finishing - I	3	0	2	5	70	30	30	20	150	28
2162806	Physical Characteristics of textile fibre	3	0	0	3	70	30	0	0	100	28
	Department Elective I	4	0	2	6	70	30	30	20	150	28
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	19	0	14	33						

#### Departmental Elective I:

2162807	Chemical & Physical Analysis of Textiles
2162808	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)		
2162903	Physical Testing-II	3	0	2	5	70	30	30	20	150	29
2162904	Technical Textile-I	3	2	0	5	70	30	30	20	150	29
2162906	Fabric Structure-II	4	0	2	6	70	30	30	20	150	29
2162907	Weaving Technology-III	3	0	2	5	70	30	30	20	150	29

2162908	Modern Yarn Production	3	0	0	3	70	30	0	0	100	29
	Departmental Elective - I -	4	0	2	6	70	30	30	20	150	29
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	20	2	11	33						

### 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)		
2161001	Digital communication	4	0	2	6	70	30	30	20	150	32
2163201	Operation Research	4	0	2	6	70	30	30	20	150	32
2163202	Internet & web Technology	4	0	2	6	70	30	30	20	150	32
2163203	Engineering Electromagnetics & wave Progogation	4	0	2	6	70	30	30	20	150	32
	Departmental Elective - I	4	0	2	6	70	30	30	20	150	32
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	20	0	13	33						

#### Departmental Elective I

2161005	Optical Communication
2163204	Telecommunication Engineering
2163205	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)		
2163401	Finite Element Analysis in Manufacturing Eng	4	0	2	6	70	30	30	20	150	34
2163403	Advanced Manufacturing Processes	4	0	2	6	70	30	30	20	150	34
2163404	Tool Design	4	0	2	6	70	30	30	20	150	34

2163405	Mechatronics	4	0	2	6	70	30	30	20	150	34
	Department Elective-I	4	0	2	6	70	30	30	20	150	34
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	20	0	13	33						

**Departmental Elective I:**

2163407	Machine Design
2163408	Dynamics of Machinery

**Chemical Technology (36)**

**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)		
2153609	Basics of Mass Transfer	3	0	2	5	70	30	30	20	150	36
2153610	Analytical Techniques	3	0	2	5	70	30	30	20	150	36
2153611	Chemical Thermodynamics & Kinetics	3	1	2	6	70	30	30	20	150	36
	Department Elective-VI	4	0	3	7	70	30	30	20	150	36
	Department Elective-VII	4	0	3	7	70	30	30	20	150	36
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	17	1	15	33						

**Department Elective- VI**

Code	Name of the subject
2163605	Technology of Solid Dosage Forms & Medicinal Natural Products
2163606	Compounding & Processing of Plastics & Rubbers-II
2163607	Technology of Ceramic Coatings
2163608	Principles of Dyeing & Printing

**Department Elective- VII**

Code	Name of the subject
2153612	Process Technology of Drugs & Intermediates

2153613	Evaluation & Testing of Polymers & Rubbers
2153614	Technology of Whitewares
2153615	Environmental Aspects of Dyes & Pigment Industry

### 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)		
2163901	Coating technology	4	0	4	8	70	30	30	20	150	39
2163902	Nanopolymers and Nano-composites	3	0	2	5	70	30	30	20	150	39
2163903	Nanotechnology and Medicine	3	0	0	3	70	30	0	0	100	39
2163904	Non-conventional energy sources	3	0	0	3	70	30	0	0	100	39
2163905	Microelectronics and VLSI	3	0	2	5	70	30	30	20	150	39
	Departmental Elective I	4	0	2	6	70	30	30	20	150	39
2160001	Design Engineering - II B	0	0	3	3	0	0	100	50	150	1
	<b>Total</b>	20	0	13	33						

#### Departmental Elective I

2163906	Nanomagnetism and NanoFluids
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