



Symbiosis Institute of Technology, Pune
Bachelor of Technology (Electronics & Tele-Communication Engineering)
Programme Structure 2020-24

1. OBJECTIVE	<p>B.Tech is a full-time four year graduation programme, which aims at transforming a student into a technically sound professional. The syllabus contains courses on basic sciences, technical arts, humanities & liberal arts and professional courses. The mix of these courses has been evolved with an aim to produce professionals who have knowledge not only of Engineering but who are good managers to contribute in a cross-functional team and have human values. Being a professional programme it ensures a healthy balance between theoretical foundation and practical exposure to the present day world. The emphasis is to develop all round personality that would enable the students to take up the challenges of the corporate world and also become responsible citizens of the society.</p>			
2. DURATION (IN MONTHS)	48 (Full Time)			
3. INTAKE	120			
4. RESERVATION	I. Within the sanctioned intake	a) SC (In Percentage)	b) ST (In Percentage)	c) Differently abled (In Percentage)
		15	7.5	3
	II. Over and above the sanctioned intake	a) Kashmiri Migrants (In Seats)		b) International Students (In Percentage)
		2		15
5. ELIGIBILITY	<p>Passed 10+2 examination with Physics and Mathematics as compulsory subjects along with one of Chemistry/ Biotechnology/ Biology/ Technical Vocational subjects. Obtained at least 45% marks or equivalent grade (40% marks or equivalent grade for Scheduled Caste /Scheduled Tribes) in the above subjects taken together.</p> <p>B. Tech (Lateral entry to second year) :</p> <p>a) Passed Diploma examination from an AICTE approved Institution; with at least 45% marks or equivalent grade (40% marks or equivalent grade for Scheduled Caste /Scheduled Tribes) in appropriate branch of Engineering / Technology.</p> <p>b) Passed B.Sc. Degree from a recognized University as defined by UGC, with at least 45% marks or equivalent grade (40% marks or equivalent grade for Scheduled Caste /Scheduled Tribes) and passed XII standard with mathematics as a subject.</p> <p>c) Provided that in case of students belonging to B. Sc. Stream, shall clear the subjects of Engineering Graphics / Engineering Drawing and Engineering Mechanics of the first year Engineering program along with the second year subjects.</p> <p>d) Provided further that, the students belonging to B. Sc. Stream shall be considered only after filling the supernumerary seats in this category with students belonging to the Diploma stream.</p> <p>e) Provided further that students, who have passed Diploma in Engineering and Technology from an AICTE approved Institution or B. Sc. Degree from a recognized University as defined by UGC, shall also be eligible for admission to</p>			



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		the first year Engineering Degree courses subject to vacancies in the first year class in case the vacancies at lateral entry are exhausted. However the admissions shall be based strictly on the eligibility criteria as mentioned in a, b, c, and d above.			
6.	SELECTION PROCEDURE	Merit list by a valid score of Symbiosis Entrance Test (SIT EEE) or Joint Entrance Examination (JEE - Mains) or All States Engineering Entrance Test.			
7.	MEDIUM OF INSTRUCTION	English			
8.	PROGRAMME PATTERN	Semester			
9.	COURSE & SPECIALIZATION	<p>As per Annexure A Students can pursue additional specialization in the following areas by completing 20 credits specified in the program structure of that specialization beyond the minimum requirement for the award of degree.</p> <ul style="list-style-type: none"> - Embedded System - Signal Processing - Mechatronics and Automation - Optoelectronics and Communication - Bioelectronics System - Sustainable Energy Devices and Systems 			
10.	FEE		Academic Fee p.a	Institute Deposit	Total
		Indian Students	260000	20000	280000
		International Students (USD equivalent to INR)	390000	20000	410000
11.	ASSESSMENT	All internal courses will have 100% component as internal evaluation at the institute level. All external courses will have 40% internal component and 60% component as external [University] examination. The internal and external will be separate heads of passing.			
12.	STANDARD OF PASSING	The assessment of the student for each examination is done, based on relative performance. Maximum Grade Point (GP) is 10 corresponding to O (Outstanding). For all courses, a student is required to pass both internal and external examination separately with a minimum Grade Point of 4 corresponding to Grade P. Students securing less than 40% absolute marks in each head of passing will be declared FAIL. The University awards a degree to the student who has achieved a minimum CGPA of 4 out of maximum of 10 CGPA for the programme.			
13.	AWARD OF DEGREE/ DIPLOMA/ CERTIFICATE	Bachelor of Technology (Electronics and Tele-Communication Engineering) will be awarded at the end of semester VIII examination by taking into consideration the performance of all semester examinations after obtaining minimum 4.00 CGPA out of 10 CGPA.			

14. NATURE WISE DISTRIBUTION OF CREDITS							
Semester	Generic Core	Generic Elective	Specialization Core	Specialization Elective	Open Elective	Audit	Total
1	19	0	0	0	0	0	19
2	21	0	0	0	0	0	21
3	19	1	0	0	0	1*	20
4	22	2	0	0	0	1*	24
5	20	4	0	0	0	0	24
6	18	7	0	0	0	0	25
7	8	15	0	0	0	0	23
8	14	0	0	0	0	0	14
Total	141	29	0	0	0	0	170
Optional Additional Courses							
Total	0	0	20	0	0	0	20
Grand Total							190

* Satisfactory completion of the non letter grade courses 'Integrated Disaster Management' and 'Fitness for Life' is mandatory for the award of degree.

Note: For additional specializations (optional) as applicable, fees of Rs.25000/- will be charged, additionally in the third year

Programme Structure is approved by the Academic Council subject to its norms & conditions. Any provision in the Programme Structure which violates the basic rules & regulations is deemed to be termed "Null & Void".

Head-Academics

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Annexure A

Catalog Course Code	Course Code	Course Title	Nature	Teaching Scheme			Practical		Examination Scheme Marks		Total Credits	Total
				L	T	La b	CA	ESE	CA	ESE		
Semester : 1												
Generic Core Courses												
TE7168	0701230101	Engineering Mathematics -I	BS	3	1	0	0	0	40	60	4	100
T7391	0701230102	Physics	BS	3	0	0	0	0	30	45	3	75
T7392	0701230103	Physics lab	BS	0	0	2	10	15	0	0	1	25
T7383	0701230104	Communication Skills	HS	2	0	0	0	0	20	30	2	50
T7384	0701230105	Communication skills lab	HS	0	0	2	10	15	0	0	1	25
TE7188	0701230106	Environmental Science	ES	2	0	0	0	0	20	30	2	50
TE7286	0701230107	Programming and Problem Solving	ES	2	0	0	0	0	20	30	2	50
TE7287	0701230108	Programming and Problem Solving Lab	ES	0	0	2	10	15	0	0	1	25
TE7310	0701230109	Computational Techniques I		2	0	0	0	0	50	0	2	50
T6773	0701230110	Creative Thinking	HS	1	0	0	0	0	25	0	1	25
Total				15	1	6	30	45	205	195	19	475
Semester : 2												
Generic Core Courses												
TE7169	0701230201	Engineering Mathematics -II	BS	3	1	0	0	0	40	60	4	100
T7540	0701230202	Basic Electrical and Electronics Engineering	ES	3	0	0	0	0	30	45	3	75
T7593	0701230203	Basic Electrical and Electronics Engineering Lab	ES	0	0	2	10	15	0	0	1	25
T7381	0701230204	Chemistry	BS	3	0	0	0	0	30	45	3	75
T7382	0701230205	Chemistry Lab	BS	0	0	2	10	15	0	0	1	25
TE7311	0701230206	Computational Techniques II		3	0	0	0	0	75	0	3	75
T7925	0701230207	Engineering Graphics Lab	ES	0	0	4	20	30	0	0	2	50
T6732	0701230208	Critical Thinking	HS	1	0	0	0	0	25	0	1	25
TE7396	0701230209	Software Tools	ES	0	0	2	25	0	0	0	1	25
TE7300	0701230210	Tinker Lab	ES	0	0	4	50	0	0	0	2	50
Total				13	1	14	115	60	200	150	21	525
Semester : 3												
Generic Core Courses												
F0004	0701230301	Flexi-Credit Course	PC	4	0	0	0	0	100	0	4	100
TE7083	0701230302	Signals and Systems	PC	3	0	0	0	0	30	45	3	75
TE7170	0701230303	Engineering Mathematics-III	BS	2	1	0	0	0	30	45	3	75
TE7320	0701230304	Electronic Devices and Circuits	PC	3	0	0	0	0	30	45	3	75



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Catalog Course Code	Course Code	Course Title	Nature	Teaching Scheme			Practical		Examination Scheme Marks		Total Credits	Total
				L	T	La b	CA	ESE	CA	ESE		
TE7321	0701230305	Electronic Devices and Circuits Lab	PC	0	0	2	10	15	0	0	1	25
TE7336	0701230306	Network Theory	PC	3	0	0	0	0	30	45	3	75
T2646	0701230307	Entrepreneurship Venture	HS	1	0	0	0	0	25	0	1	25
TE7322	0701230308	Electronic Measurements Lab	PC	0	0	2	10	15	0	0	1	25
TH4095	0701230309	Fitness for Life *		0	0	0	0	0	0	0	Non Letter Grade	0
Total				16	1	4	20	30	245	180	19	475
Generic Elective Courses Group												
T6760	0701230310	Introduction to Indian Philosophy	OE	1	0	0	0	0	25	0	1	25
T6761	0701230311	Foundation of Ethics	OE	1	0	0	0	0	25	0	1	25
Total Required Credits							0	0	25	0	1	25
Semester : 4												
Generic Core Courses												
T7547	0701230401	Control Systems	PC	3	1	0	0	0	40	60	4	100
T7548	0701230402	Control Systems Lab	PC	0	0	2	10	15	0	0	1	25
T7562	0701230403	Electromagnetic Field Theory	PC	3	1	0	0	0	40	60	4	100
TE7084	0701230404	Analog Circuit Design	PC	3	0	0	0	0	30	45	3	75
T7536	0701230405	Analog Circuit Design Lab	PC	0	0	2	10	15	0	0	1	25
F0003	0701230406	Flexi-Credit Course	PC	3	0	0	0	0	75	0	3	75
TE7425	0701230407	Principles of Communication	PC	3	0	0	0	0	30	45	3	75
TE7029	0701230408	Principles of Communication Lab	PC	0	0	2	10	15	0	0	1	25
TE7290	0701230409	Project Based Learning -I	PIS	0	0	4	50	0	0	0	2	50
T4005	0701230410	Integrated Disaster Management *		0	0	0	0	0	0	0	Non Letter Grade	0
Total				15	2	10	80	45	215	210	22	550
Generic Elective Courses Group												
T6184	0701230411	Basic German I	OE	2	0	0	0	0	50	0	2	50
T6186	0701230412	Basic French I	OE	2	0	0	0	0	50	0	2	50
T6188	0701230413	Basic Spanish I	OE	2	0	0	0	0	50	0	2	50
Total Required Credits							0	0	50	0	2	50
Semester : 5												



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				L	T	Lab	CA	ESE	CA	ESE		
Generic Core Courses												
T7558	0701230501	Digital Signal Processing	PC	3	1	0	0	0	40	60	4	100
T7559	0701230502	Digital Signal Processing Lab	PC	0	0	2	10	15	0	0	1	25
TE7316	0701230503	Digital Communication	PC	3	0	0	0	0	30	45	3	75
T7552	0701230504	Digital Communication Lab	PC	0	0	2	10	15	0	0	1	25
TE7174	0701230505	Probability, Random Variables and Stochastic Process	PC	3	0	0	0	0	30	45	3	75
T8000	0701230506	Service Learning	HS	0	0	8	0	0	100	0	4	100
F0002	0701230507	Flexi-Credit Course	PC	2	0	0	0	0	50	0	2	50
TE7291	0701230508	Project Based Learning-II	PIS	0	0	4	50	0	0	0	2	50
Total				11	1	16	70	30	250	150	20	500
Specialization Core Courses for Optional Additional Specialization : Bioelectronics Systems (Major)												
TE7333	0701230509	Introduction to Computer Vision	PC	4	0	0	0	0	40	60	4	100
T7801	0701230510	Project Phase- I	PIS	0	0	2	10	15	0	0	1	25
Total				4	0	2	10	15	40	60	5	125
Specialization Core Courses for Optional Additional Specialization : Embedded Systems (Major)												
T7801	0701230510	Project Phase- I	PIS	0	0	2	10	15	0	0	1	25
TE7298	0701230511	System Programming	PC	4	0	0	0	0	40	60	4	100
Total				4	0	2	10	15	40	60	5	125
Specialization Core Courses for Optional Additional Specialization : Mechatronics and Automation (Major)												
T7801	0701230510	Project Phase- I	PIS	0	0	2	10	15	0	0	1	25
TE7330	0701230512	Industrial Robotics	PC	4	0	0	0	0	40	60	4	100
Total				4	0	2	10	15	40	60	5	125
Specialization Core Courses for Optional Additional Specialization : Optoelectronics and Communication (Major)												
T7801	0701230510	Project Phase- I	PC	0	0	2	10	15	0	0	1	25
TE7345	0701230513	Theory of Light and Lasers	PC	4	0	0	0	0	40	60	4	100
Total				4	0	2	10	15	40	60	5	125
Specialization Core Courses for Optional Additional Specialization : Signal Processing (Major)												
T7801	0701230510	Project Phase- I	PIS	0	0	2	10	15	0	0	1	25
T7086	0701230514	Advanced Digital Signal Processing	PC	4	0	0	0	0	40	60	4	100
Total				4	0	2	10	15	40	60	5	125
Specialization Core Courses for Optional Additional Specialization : Sustainable Energy Devices and Systems (Major)												
T7801	0701230510	Project Phase- I	PIS	0	0	2	10	15	0	0	1	25
TE7344	0701230515	Sustainable Energy And Solar Photovoltaic Systems	PC	4	0	0	0	0	40	60	4	100



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				L	T	Lab	CA	ESE	CA	ESE		
Total				4	0	2	10	15	40	60	5	125
Generic Elective Courses Group												
TE7090	0701230516	Antenna and Wave Propagation	PE	3	0	0	0	0	30	45	3	75
TE7323	0701230517	Electronic System Design	PE	3	0	0	0	0	30	45	3	75
TE7085	0701230518	Power Electronics	PE	3	0	0	0	0	30	45	3	75
Total Required Credits							0	0	30	45	3	75
Generic Elective Courses Group												
TE7091	0701230519	Antenna and Wave Propagation Lab	PE	0	0	2	10	15	0	0	1	25
TE7324	0701230520	Electronic System Design Lab	PE	0	0	2	10	15	0	0	1	25
T7583	0701230521	Power Electronics Lab	PE	0	0	2	10	15	0	0	1	25
Total Required Credits							10	15	0	0	1	25
Semester : 6												
Generic Core Courses												
F0004	0701230601	Flexi-Credit Course	PC	4	0	0	0	0	100	0	4	100
T7908	0701230602	Computer Networks	PC	3	0	0	0	0	30	45	3	75
T7482	0701230603	Computer Networks Lab	PC	0	0	2	10	15	0	0	1	25
T2658	0701230604	Design Thinking	HS	2	0	0	0	0	50	0	2	50
T7802	0701230605	Project Based Learning-III	PIS	0	0	4	0	0	50	0	2	50
TE7426	0701230606	Electronic Design Workshop	PC	0	0	4	20	30	0	0	2	50
T7802	0701230607	Capstone Course	PC	2	0	0	0	0	50	0	2	50
T6774	0701230608	Principles of Economics	HS	2	0	0	0	0	50	0	2	50
Total				13	0	10	30	45	330	45	18	450
Specialization Core Courses for Optional Additional Specialization : Bioelectronics Systems (Major)												
TE7308	0701230609	Biomedical Imaging Systems	PC	4	0	0	0	0	40	60	4	100
T7802	0701230610	Seminar	PIS	0	0	4	20	30	0	0	2	50
T7802	0701230611	Project Phase- II	PIS	0	0	4	20	30	0	0	2	50
Total				4	0	8	40	60	40	60	8	200
Specialization Core Courses for Optional Additional Specialization : Embedded Systems (Major)												
T7802	0701230610	Seminar	PIS	0	0	4	20	30	0	0	2	50
T7802	0701230611	Project Phase- II	PIS	0	0	4	20	30	0	0	2	50
TE7325	0701230612	Embedded Linux	PC	4	0	0	0	0	40	60	4	100
Total				4	0	8	40	60	40	60	8	200
Specialization Core Courses for Optional Additional Specialization : Mechatronics and Automation (Major)												



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				L	T	La b	CA	ESE	CA	ESE		
T7802	0701230610	Seminar	PIS	0	0	4	20	30	0	0	2	50
T7802	0701230611	Project Phase- II	PIS	0	0	4	20	30	0	0	2	50
T7100	0701230613	Mechatronics	PC	4	0	0	0	0	40	60	4	100
Total				4	0	8	40	60	40	60	8	200
Specialization Core Courses for Optional Additional Specialization : Optoelectronics and Communication (Major)												
T7802	0701230610	Seminar	PIS	0	0	4	20	30	0	0	2	50
T7802	0701230611	Project Phase- II	PIS	0	0	4	20	30	0	0	2	50
TE7337	0701230614	Optical Devices and Fiber Optics	PC	4	0	0	0	0	40	60	4	100
Total				4	0	8	40	60	40	60	8	200
Specialization Core Courses for Optional Additional Specialization : Signal Processing (Major)												
T7802	0701230610	Seminar	PIS	0	0	4	20	30	0	0	2	50
T7802	0701230611	Project Phase- II	PIS	0	0	4	20	30	0	0	2	50
T7112	0701230615	VLSI Digital Signal Processing System	PC	4	0	0	0	0	40	60	4	100
Total				4	0	8	40	60	40	60	8	200
Specialization Core Courses for Optional Additional Specialization : Sustainable Energy Devices and Systems (Major)												
T7802	0701230610	Seminar	PIS	0	0	4	20	30	0	0	2	50
T7802	0701230611	Project Phase- II	PIS	0	0	4	20	30	0	0	2	50
TE7346	0701230616	Wind Energy Systems	PC	4	0	0	0	0	40	60	4	100
Total				4	0	8	40	60	40	60	8	200
Generic Elective Courses Group												
T7580	0701230617	Microwaves and Radar	PE	3	0	0	0	0	30	45	3	75
TE7089	0701230618	Modern Control Theory	PE	3	0	0	0	0	30	45	3	75
TE7427	0701230619	Embedded System Design	PE	3	0	0	0	0	30	45	3	75
TE7088	0701230620	Digital Image Processing	PE	3	0	0	0	0	30	45	3	75
TE7315	0701230621	Digital CMOS VLSI Design	PE	3	0	0	0	0	30	45	3	75
Total Required Credits							0	0	30	45	3	75
Generic Elective Courses Group												
T7579	0701230622	Microwave and Radar Lab	PE	0	0	2	10	15	0	0	1	25
TE7039	0701230623	Modern Control Theory Lab	PE	0	0	2	10	15	0	0	1	25
T7567	0701230624	Embedded System Design Lab	PE	0	0	2	10	15	0	0	1	25
T7094	0701230625	Digital Image Processing Lab	PE	0	0	0	10	15	0	0	1	25
TE7132	0701230626	CAD for VLSI Design Lab	PE	0	0	2	10	15	0	0	1	25



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				L	T	Lab	CA	ESE	CA	ESE		
Total Required Credits							10	15	0	0	1	25
Generic Elective Courses Group												
T7574	0701230627	MATLAB	OE	3	0	0	0	0	30	45	3	75
TE7335	0701230628	Introduction to Robotics	OE	3	0	0	0	0	30	45	3	75
TE7339	0701230629	Renewable Energy Systems	OE	3	0	0	0	0	30	45	3	75
TE7428	0701230630	Introduction to Image Processing	OE	3	0	0	0	0	30	45	3	75
TE7223	0701230631	Smart Urban Planning	OE	3	0	0	0	0	30	45	3	75
TE7240	0701230632	Water Resource Planning and Management	OE	3	0	0	0	0	30	45	3	75
T7499	0701230633	Java	OE	3	0	0	0	0	30	45	3	75
TE7265	0701230634	Introduction to Data Science	OE	3	0	0	0	0	30	45	3	75
TE7263	0701230635	Introduction to AI and Machine Learning	OE	3	0	0	0	0	30	45	3	75
TE7388	0701230636	Quality Management Techniques	OE	3	0	0	0	0	30	45	3	75
TE7319	0701230637	Electrical and Electronics Materials	OE	3	0	0	0	0	30	45	3	75
TE7351	0701230638	3D Printing and Prototyping	OE	3	0	0	0	0	30	45	3	75
T2618	0701230639	Project Management	OE	3	0	0	0	0	30	45	3	75
T7020	0701230640	Nanotechnology	OE	3	0	0	0	0	30	45	3	75
T7393	0701230641	Computer Based Statistical Packages	OE	3	0	0	0	0	30	45	3	75
Total Required Credits							0	0	30	45	3	75
Semester : 7												
Generic Core Courses												
T7804	0701230701	Project	PIS	0	0	8	40	60	0	0	4	100
T7674	0701230702	Cyber Security	PC	2	0	0	0	0	50	0	2	50
F0002	0701230703	Flexi-Credit Course	PC	2	0	0	0	0	50	0	2	50
Total				4	0	8	40	60	100	0	8	200
Specialization Core Courses for Optional Additional Specialization : Bioelectronics Systems (Major)												
TE7050	0701230704	Biomedical Instrumentation	PC	4	0	0	0	0	40	60	4	100
T7802	0701230705	Project Phase- III	PIS	0	0	4	20	30	0	0	2	50
TE7309	0701230706	Biomedical Instrumentation Lab	PC	0	0	2	10	15	0	0	1	25
Total				4	0	6	30	45	40	60	7	175
Specialization Core Courses for Optional Additional Specialization : Embedded Systems (Major)												
T7802	0701230705	Project Phase- III	PIS	0	0	4	20	30	0	0	2	50



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				L	T	La b	CA	ESE	CA	ESE		
TE7304	0701230707	Advanced Microcontrollers and RTOS	PC	4	0	0	0	0	40	60	4	100
TE7305	0701230708	Advanced Microcontrollers and RTOS Lab	PC	0	0	2	10	15	0	0	1	25
Total				4	0	6	30	45	40	60	7	175
Specialization Core Courses for Optional Additional Specialization : Mechatronics and Automation (Major)												
T7802	0701230705	Project Phase- III	PIS	0	0	4	20	30	0	0	2	50
TE7125	0701230709	Mobile Robotics	PC	4	0	0	0	0	40	60	4	100
TE7056	0701230710	Mobile Robotics Lab	PC	0	0	2	10	15	0	0	1	25
Total				4	0	6	30	45	40	60	7	175
Specialization Core Courses for Optional Additional Specialization : Optoelectronics and Communication (Major)												
T7802	0701230705	Project Phase- III	PIS	0	0	4	20	30	0	0	2	50
TE7432	0701230711	Optical Communication Systems	PC	4	0	0	0	0	40	60	4	100
TE7433	0701230712	Optical Communication Systems Lab	PC	0	0	2	10	15	0	0	1	25
Total				4	0	6	30	45	40	60	7	175
Specialization Core Courses for Optional Additional Specialization : Signal Processing (Major)												
T7802	0701230705	Project Phase- III	PIS	0	0	4	20	30	0	0	2	50
TE7302	0701230713	Adaptive Signal Processing	PC	4	0	0	0	0	40	60	4	100
TE7303	0701230714	Adaptive Signal Processing Lab	PC	0	0	2	10	15	0	0	1	25
Total				4	0	6	30	45	40	60	7	175
Specialization Core Courses for Optional Additional Specialization : Sustainable Energy Devices and Systems (Major)												
T7802	0701230705	Project Phase- III	PIS	0	0	4	20	30	0	0	2	50
TE7313	0701230715	Devices and Grid Systems for Sustainable Energy	PC	4	0	0	0	0	40	60	4	100
TE7314	0701230716	Devices and Grid Systems for Sustainable Energy Lab	PC	0	0	2	10	15	0	0	1	25
Total				4	0	6	30	45	40	60	7	175
Generic Elective Courses Group												
T7473	0701230717	Artificial Intelligence	PE	3	0	0	0	0	30	45	3	75
TE7045	0701230718	IoT and Applications	PE	3	0	0	0	0	30	45	3	75
TE7326	0701230719	Fiber Optics And Satellite Communication	PE	3	0	0	0	0	30	45	3	75
TE7340	0701230720	Scientific Computing	PE	3	0	0	0	0	30	45	3	75
Total Required Credits							0	0	30	45	3	75



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Annexure A

Catalog Course Code	Course Code	Course Title	Nature	Teaching Scheme			Practical		Examination Scheme Marks		Total Credits	Total
				L	T	Lab	CA	ESE	CA	ESE		
Generic Elective Courses Group												
TE7014	0701230721	Artificial Intelligence Lab	PE	0	0	2	10	15	0	0	1	25
TE7048	0701230722	IoT and Applications Lab	PE	0	0	2	10	15	0	0	1	25
TE7327	0701230723	Fiber Optics And Satellite Communication Lab	PE	0	0	2	10	15	0	0	1	25
TE7341	0701230724	Scientific Computing Lab	PE	0	0	2	10	15	0	0	1	25
Total Required Credits							10	15	0	0	1	25
Generic Elective Courses Group												
TE7306	0701230725	Biomedical Electronics	PE	3	0	0	0	0	30	45	3	75
TE7317	0701230726	Digital Control System	PE	3	0	0	0	0	30	45	3	75
TE7342	0701230727	Speech and Audio Signal Processing	PE	3	0	0	0	0	30	45	3	75
TE7347	0701230728	Wireless Communication	PE	3	0	0	0	0	30	45	3	75
Total Required Credits							0	0	30	45	3	75
Generic Elective Courses Group												
TE7307	0701230729	Biomedical Electronics Lab	PE	0	0	2	10	15	0	0	1	25
TE7318	0701230730	Digital Control System Lab	PE	0	0	2	10	15	0	0	1	25
TE7343	0701230731	Speech and Audio Signal Processing Lab	PE	0	0	2	10	15	0	0	1	25
TE7348	0701230732	Wireless Communication Lab	PE	0	0	2	10	15	0	0	1	25
Total Required Credits							10	15	0	0	1	25
Generic Elective Courses Group												
TE7171	0701230733	Introduction to Mathematical Modelling	OE	3	0	0	0	0	30	45	3	75
TE7195	0701230734	GIS Applications	OE	3	0	0	0	0	30	45	3	75
TE7204	0701230735	Intelligent Transportation Systems	OE	3	0	0	0	0	30	45	3	75
TE7264	0701230736	Introduction to BIGDATA	OE	3	0	0	0	0	30	45	3	75
T7474	0701230737	Basics of Database	OE	3	0	0	0	0	30	45	3	75
T7616	0701230738	Fundamentals of Automotive Technology	OE	3	0	0	0	0	30	45	3	75
T7529	0701230739	Machine Learning	OE	3	0	0	0	0	30	45	3	75
T7509	0701230740	Open Source Technologies	OE	3	0	0	0	0	30	45	3	75
T7584	0701230741	Printed Circuit Board (PCB) Design	OE	3	0	0	0	0	30	45	3	75



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Annexure A

Catalog Course Code	Course Code	Course Title	Nature	Teaching Scheme			Practical		Examination Scheme Marks		Total Credits	Total
				L	T	Lab	CA	ESE	CA	ESE		
T7650	0701230742	Six sigma	OE	3	0	0	0	0	30	45	3	75
T7394	0701230743	Smart Materials	OE	3	0	0	0	0	30	45	3	75
TE7334	0701230744	Introduction to Mechatronics	OE	3	0	0	0	0	30	45	3	75
TE7338	0701230745	Principles of Modern Communication Systems	OE	3	0	0	0	0	30	45	3	75
TE7376	0701230746	Introduction to Operations Research	OE	0	0	0	0	0	30	45	3	75
TE7377	0701230747	Introduction to Optimisation	OE	0	0	0	0	0	30	45	3	75
Total Required Credits							0	0	30	45	3	75
Generic Elective Courses Group												
TE7429	0701230748	Information Theory and Coding	PE	2	0	0	0	0	20	30	2	50
TE7430	0701230749	Computer Architecture	PE	2	0	0	0	0	20	30	2	50
TE7431	0701230750	Wireless Sensor Network	PE	2	0	0	0	0	20	30	2	50
Total Required Credits							0	0	20	30	2	50
Generic Elective Courses Group												
TE7438	0701230751	History of Science and Technology	OE	2	0	0	0	0	50	0	2	50
T6004	0701230752	Organizational Behavior	OE	2	0	0	0	0	50	0	2	50
Total Required Credits							0	0	50	0	2	50
Semester : 8												
Generic Core Courses												
T7912	0701230801	Internship	PIS	0	0	24	180	120	0	0	12	300
T7802	0701230802	Seminar	PIS	0	0	4	50	0	0	0	2	50
Total				0	0	28	230	120	0	0	14	350



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Semester	Internal Credits	External Credits	Total Credits	Total Marks
Semester1	3	16	19	475
Semester2	7	14	21	525
Semester3	6	14	20	500
Semester4	7	17	24	600
Semester5	8	16	24	600
Semester6	12	13	25	625
Semester7	6	17	23	575
Semester8	2	12	14	350
Total	51	119	170	4250