



**Symbiosis Institute of Technology, Pune**  
**Master of Technology (Electronics & Tele-Communication Engineering)**  
**Programme Structure 2020-22**

1.	<b>OBJECTIVE</b>	To generate competent manpower in the emerging areas of Electronics and Telecommunication Technology. To inculcate among the students an aptitude for engineering and research for the furthering of knowledge in the chosen field.			
2.	<b>DURATION (IN MONTHS)</b>	24 (Full Time)			
3.	<b>INTAKE</b>	18			
4.	<b>RESERVATION</b>	<b>I. Within the sanctioned intake</b>	<b>a) SC (In Percentage)</b>	<b>b) ST (In Percentage)</b>	<b>c) Differently abled (In Percentage)</b>
			15	7.5	3
		<b>II. Over and above the sanctioned intake</b>	<b>a) Kashmiri Migrants (In Seats)</b>	<b>b) International Students (In Percentage)</b>	
				2	15
5.	<b>ELIGIBILITY</b>	Engineering graduate (B.E. /B. Tech) from any recognised University/ Institution of National Importance with a minimum of 50% marks or equivalent grade (45% Marks or equivalent grade for Scheduled Caste/ Scheduled Tribes) in the discipline of Electrical/ Electronics (Communication Engineering) /Electronics and Telecommunication or Instrumentation.			
6.	<b>SELECTION PROCEDURE</b>	GATE score or Entrance Test for non-GATE candidates			
7.	<b>MEDIUM OF INSTRUCTION</b>	English			
8.	<b>PROGRAMME PATTERN</b>	Semester			
9.	<b>COURSE &amp; SPECIALIZATION</b>	As per Annexure A			
10.	<b>FEE</b>		<b>Academic Fee p.a</b>	<b>Institute Deposit</b>	<b>Total</b>
		<b>Indian Students</b>	185000	20000	205000
		<b>International Students (USD equivalent to INR)</b>	280000	20000	300000
11.	<b>ASSESSMENT</b>	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.			
12.	<b>STANDARD OF PASSING</b>	The assessment of students 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 10CGPA for the programme.					
13.	<b>AWARD OF DEGREE/ DIPLOMA/ CERTIFICATE</b>	Master of Technology (Electronics and Tele-Communication Engineering) will be awarded at the end of semester IV examination by taking into consideration the performance of all semester examinations after obtaining minimum 4.00 CGPA out of 10 CGPA.					
14.	<b>NATURE WISE DISTRIBUTION OF CREDITS</b>						
Semester	Generic Core	Generic Elective	Specialization Core	Specialization Elective	Open Elective	Audit	Total
1	18	9	0	0	0	0	27
2	16	9	0	0	0	1*	25
3	14	0	0	0	0	1*	14
4	14	0	0	0	0	0	14
<b>Total</b>	<b>62</b>	<b>18</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>80</b>
* Satisfactory completion of the non letter- grade courses 'Integrated Disaster Management' and 'Research Publication' is mandatory for award of degree.							

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		
<b>Semester : 1</b>												
<b>Generic Core Courses</b>												
T7086	0701430101	Advanced Digital Signal Processing	PC	4	0	0	0	0	120	80	4	200
T7100	0701430102	Mechatronics	PC	4	0	0	0	0	120	80	4	200
T7026	0701430103	Research Methodology in Engineering	PD	3	0	0	0	0	150	0	3	150
T7674	0701430104	Cyber Security	PC	2	0	0	0	0	100	0	2	100
T7687	0701430105	Seminar	PIS	0	0	4	0	0	100	0	2	100
T7087	0701430106	Advanced Digital Signal Processing Lab	PC	0	0	2	30	20	0	0	1	50
T7101	0701430107	Mechatronics Lab	PC	0	0	2	30	20	0	0	1	50
TE7113	0701430108	Communication Skill Lab	HS	0	0	2	30	20	0	0	1	50
<b>Total</b>				<b>13</b>	<b>0</b>	<b>10</b>	<b>90</b>	<b>60</b>	<b>590</b>	<b>160</b>	<b>18</b>	<b>900</b>
<b>Generic Elective Courses Group</b>												
TE7114	0701430109	Real Time Operating System	PE	4	0	0	0	0	120	80	4	200
TE7115	0701430110	CMOS VLSI Design	PE	4	0	0	0	0	120	80	4	200
TE7116	0701430111	Advanced Wireless Communication	PE	4	0	0	0	0	120	80	4	200
TE7117	0701430112	Algorithm Design & Analysis	PE	4	0	0	0	0	120	80	4	200
<b>Total Required Credits</b>							<b>0</b>	<b>0</b>	<b>120</b>	<b>80</b>	<b>4</b>	<b>200</b>
<b>Generic Elective Courses Group</b>												
TE7118	0701430113	Real Time Operating System Lab	PE	0	0	2	30	20	0	0	1	50
TE7119	0701430114	CMOS VLSI Design Lab	PE	0	0	2	30	20	0	0	1	50
TE7120	0701430115	Advanced Wireless Communication Lab	PE	0	0	2	30	20	0	0	1	50
TE7121	0701430116	Algorithm Design & Analysis Lab	PE	0	0	2	30	20	0	0	1	50
<b>Total Required Credits</b>							<b>30</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>50</b>
<b>Generic Elective Courses Group</b>												
T7109	0701430117	Radar and Remote Sensing	PE	4	0	0	0	0	120	80	4	200
TE7123	0701430118	Neural Network	PE	4	0	0	0	0	120	80	4	200
T7098	0701430119	Lasers and Optical Electronics	PE	4	0	0	0	0	120	80	4	200
TE7122	0701430120	VLSI Digital Signal Processing	PE	4	0	0	0	0	120	80	4	200
<b>Total Required Credits</b>							<b>0</b>	<b>0</b>	<b>120</b>	<b>80</b>	<b>4</b>	<b>200</b>



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				L	T	Lab	CA	ESE	CA	ESE		
<b>Semester : 2</b>												
<b>Generic Core Courses</b>												
T7805	0701430203	Green Electronics	PC	2	0	0	0	0	100	0	2	100
T7093	0701430201	Digital Image Processing	PC	4	0	0	0	0	120	80	4	200
F0004	0701430202	Flexi-Credit Course	PC	4	0	0	0	0	200	0	4	200
T7802	0701430204	Electronics for Smart Cities	PC	2	0	0	0	0	100	0	2	100
T7687	0701430205	Seminar	PIS	0	0	4	0	0	100	0	2	100
T7094	0701430206	Digital Image Processing Lab	PC	0	0	2	30	20	0	0	1	50
TE7124	0701430207	Technical writing Lab	PD	0	0	2	30	20	0	0	1	50
T4005	0701430208	Integrated Disaster Management *		0	0	0	0	0	0	0	Non Letter Grade	0
<b>Total</b>				<b>12</b>	<b>0</b>	<b>8</b>	<b>60</b>	<b>40</b>	<b>620</b>	<b>80</b>	<b>16</b>	<b>800</b>
<b>Generic Elective Courses Group</b>												
TE7125	0701430209	Mobile Robotics	PE	4	0	0	0	0	120	80	4	200
TE7126	0701430210	IOT and Applications	PE	4	0	0	0	0	120	80	4	200
TE7128	0701430211	CAD for VLSI Design	PE	4	0	0	0	0	120	80	4	200
T7103	0701430212	Mobile ad hoc Networks	PE	4	0	0	0	0	120	80	4	200
<b>Total Required Credits</b>							<b>0</b>	<b>0</b>	<b>120</b>	<b>80</b>	<b>4</b>	<b>200</b>
<b>Generic Elective Courses Group</b>												
T7597	0701430213	Mobile ad hoc Networks Lab	PE	0	0	2	30	20	0	0	1	50
TE7129	0701430214	Mobile Robotics Lab	PE	0	0	2	30	20	0	0	1	50
TE7130	0701430215	IOT and Applications Lab	PE	0	0	2	30	20	0	0	1	50
TE7132	0701430216	CAD for VLSI Design Lab	PE	0	0	2	30	20	0	0	1	50
<b>Total Required Credits</b>							<b>30</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>50</b>
<b>Generic Elective Courses Group</b>												
TE7133	0701430217	System on Chip Architecture	PE	4	0	0	0	0	120	80	4	200
TE7134	0701430218	Low Power VLSI Design	PE	4	0	0	0	0	120	80	4	200
TE7135	0701430219	High Speed Communication Networks	PE	4	0	0	0	0	120	80	4	200
TE7136	0701430220	Deep Learning	PE	4	0	0	0	0	120	80	4	200
<b>Total Required Credits</b>							<b>0</b>	<b>0</b>	<b>120</b>	<b>80</b>	<b>4</b>	<b>200</b>
<b>Semester : 3</b>												
<b>Generic Core Courses</b>												
TE7710	0701430301	Dissertation Phase 1	PD	0	0	0	0	0	300	200	10	500



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				L	T	Lab	CA	ESE	CA	ESE		
F0004	0701430302	Flexi-Credit Course	PC	4	0	0	0	0	200	0	4	200
T0100	0701430303	Research Publication *		0	0	0	0	0	0	0	Non Letter Grade	0
<b>Total</b>				<b>4</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>500</b>	<b>200</b>	<b>14</b>	<b>700</b>
<b>Semester : 4</b>												
<b>Generic Core Courses</b>												
TE7714	0701430401	Dissertation Phase 2	PD	0	0	0	0	0	420	280	14	700
<b>Total</b>				<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>420</b>	<b>280</b>	<b>14</b>	<b>700</b>



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Semester	Internal Credits	External Credits	Total Credits	Total Marks
Semester1	7	20	27	1350
Semester2	10	15	25	1250
Semester3	4	10	14	700
Semester4	0	14	14	700
<b>Total</b>	<b>21</b>	<b>59</b>	<b>80</b>	<b>4000</b>