



**Symbiosis Institute of Technology, Pune**  
**Master of Technology (Computer Science and Engineering)**  
**Programme Structure 2020-22**

1.	<b>OBJECTIVE</b>	To generate competent manpower in the emerging areas of Computer Science and 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>	24			
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 Computer Science & Engineering or Information Technology.			
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>
			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 10 CGPA for the programme.					
13.	<b>AWARD OF DEGREE/ DIPLOMA/ CERTIFICATE</b>	Master of Technology (Computer Sciences and 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	20	4	0	0	0	0	24
2	24	4	0	0	0	1*	28
3	14	0	0	0	0	1*	14
4	14	0	0	0	0	0	14
<b>Total</b>	<b>72</b>	<b>8</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	Lab	CA	ESE	CA	ESE		
<b>Semester : 1</b>												
<b>Generic Core Courses</b>												
T7059	0701440101	Applied Algorithms	PC	4	0	0	0	0	120	80	4	200
T7060	0701440102	Applied Algorithms Lab	PC	0	0	2	30	20	0	0	1	50
T7070	0701440103	Network Computing	PC	3	0	0	0	0	90	60	3	150
T7071	0701440104	Network Computing Lab	PC	0	0	2	30	20	0	0	1	50
T7139	0701440105	Software Testing and Quality Assurance	PC	3	0	0	0	0	150	0	3	150
T7080	0701440106	Software Testing and Quality Assurance Lab	PC	0	0	2	30	20	0	0	1	50
T7802	0701440107	Seminar	PIS	0	0	4	60	40	0	0	2	100
T7674	0701440108	Cyber Security	PC	2	0	0	0	0	100	0	2	100
TE7113	0701440109	Communication Skill Lab	HS	0	0	2	30	20	0	0	1	50
TE7109	0701440110	Research Methodology in engineering	PC	2	0	0	0	0	60	40	2	100
<b>Total</b>				<b>14</b>	<b>0</b>	<b>12</b>	<b>180</b>	<b>120</b>	<b>520</b>	<b>180</b>	<b>20</b>	<b>1000</b>
<b>Generic Elective Courses Group</b>												
T7520	0701440111	Big Data	PE	3	0	0	0	0	90	60	3	150
T7529	0701440112	Machine Learning	PE	3	0	0	0	0	90	60	3	150
T3568	0701440113	Natural Language Processing	PE	3	0	0	0	0	90	60	3	150
<b>Total Required Credits</b>							<b>0</b>	<b>0</b>	<b>90</b>	<b>60</b>	<b>3</b>	<b>150</b>
<b>Generic Elective Courses Group</b>												
TE7098	0701440114	Big Data Lab	PE	0	0	2	30	20	0	0	1	50
TE7105	0701440115	Machine Learning Lab	PE	0	0	2	30	20	0	0	1	50
TE7106	0701440116	Natural Language Processing 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>Semester : 2</b>												
<b>Generic Core Courses</b>												
T7057	0701440201	Advanced Databases	PC	3	0	0	0	0	90	60	3	150
T7058	0701440202	Advanced Databases Lab	PC	0	0	2	30	20	0	0	1	50
T7068	0701440203	Intelligent Systems	PC	3	0	0	0	0	90	60	3	150
T7069	0701440204	Intelligent Systems Lab	PC	0	0	2	30	20	0	0	1	50
TE7101	0701440205	Internet of Things	PC	3	0	0	0	0	90	60	3	150
T7528	0701440206	Internet of Things Lab	PC	0	0	2	30	20	0	0	1	50
F0003	0701440207	Flexi-Credit Course	PC	3	0	0	0	0	150	0	3	150



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				L	T	Lab	CA	ESE	CA	ESE		
TE7100	0701440208	Statistical Programming	PC	2	0	0	0	0	60	40	2	100
TE7007	0701440209	Skill Development Lab	PC	0	0	8	200	0	0	0	4	200
TE7124	0701440210	Technical writing Lab	PC	0	0	2	30	20	0	0	1	50
T7802	0701440211	Seminar	PIS	0	0	4	60	40	0	0	2	100
T4005	0701440212	Integrated Disaster Management *		0	0	0	0	0	0	0	Non Letter Grade	0
<b>Total</b>				<b>14</b>	<b>0</b>	<b>20</b>	<b>380</b>	<b>120</b>	<b>480</b>	<b>220</b>	<b>24</b>	<b>1200</b>
<b>Generic Elective Courses Group</b>												
T3309	0701440213	Big Data Analytics	PE	3	0	0	0	0	90	60	3	150
TE7097	0701440214	Neural Network	PE	3	0	0	0	0	90	60	3	150
TE7110	0701440215	Distributed Systems and Cloud Computing	PE	3	0	0	0	0	90	60	3	150
<b>Total Required Credits</b>							<b>0</b>	<b>0</b>	<b>90</b>	<b>60</b>	<b>3</b>	<b>150</b>
<b>Generic Elective Courses Group</b>												
TE7107	0701440216	Big Data Analytics Lab	PE	0	0	2	30	20	0	0	1	50
TE7112	0701440217	Neural Networks Lab	PE	0	0	2	30	20	0	0	1	50
TE7111	0701440218	Distributed Systems and Cloud Computing 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>Semester : 3</b>												
<b>Generic Core Courses</b>												
TE7710	0701440301	Dissertation Phase 1	PIS	10	0	0	0	0	300	200	10	500
F0004	0701440302	Flexi-Credit Course	PC	4	0	0	0	0	200	0	4	200
T0100	0701440303	Research Publication *		0	0	0	0	0	0	0	Non Letter Grade	0
<b>Total</b>				<b>14</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	0701440401	Dissertation Phase 2	PIS	14	0	0	0	0	420	280	14	700
<b>Total</b>				<b>14</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	5	19	24	1200
Semester2	7	21	28	1400
Semester3	4	10	14	700
Semester4	0	14	14	700
<b>Total</b>	<b>16</b>	<b>64</b>	<b>80</b>	<b>4000</b>