



**Symbiosis Institute of Technology, Pune**  
**Master of Technology (Computer Science and Engineering)**  
**Programme Structure 2019-21**

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>
		<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 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. NATURE WISE DISTRIBUTION OF CREDITS**

Semester	Generic Core	Generic Elective	Specialization Core	Specialization Elective	Open Elective	Audit	Total
1	22	4	0	0	0	0	26
2	22	4	0	0	0	0	26
3	14	0	0	0	0	1*	14
4	14	0	0	0	0	1*	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.

The revised programme structure supersedes the previously approved programme structure dated 27/11/2020 for the programme.

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	Specialization	Credits	Internal Marks	External Mark	Internal Practical Marks	External Practical Marks	Total Marks
<b>Semester : 1</b>									
<b>Generic Core Courses</b>									
T7059	070144101	Applied Algorithms		4	120	80	0	0	200
TE7007	070144102	Skill Development Lab		4	0	0	200	0	200
T7070	070144103	Network Computing		3	90	60	0	0	150
T7139	070144104	Software Testing and Quality Assurance		3	150	0	0	0	150
T7674	070144105	Cyber Security		2	100	0	0	0	100
T7802	070144106	Seminar		2	0	0	60	40	100
T7060	070144107	Applied Algorithms Lab		1	0	0	30	20	50
T7071	070144108	Network Computing Lab		1	0	0	30	20	50
T7080	070144109	Software Testing and Quality Assurance Lab		1	0	0	30	20	50
TE7113	070144110	Communication Skill Lab		1	0	0	30	20	50
<b>Total</b>				<b>22</b>	<b>460</b>	<b>140</b>	<b>380</b>	<b>120</b>	<b>1100</b>
<b>Generic Elective Courses Group</b>									
T7520	070144111	Big Data		3	90	60	0	0	150
T7529	070144112	Machine Learning		3	90	60	0	0	150
T3568	070144113	Natural Language Processing		3	90	60	0	0	150
<b>Total Required Credits</b>				<b>3</b>	<b>90</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>150</b>
<b>Generic Elective Courses Group</b>									
TE7098	070144114	Big Data Lab		1	0	0	30	20	50
TE7105	070144115	Machine Learning Lab		1	0	0	30	20	50
TE7106	070144116	Natural Language Processing Lab		1	0	0	30	20	50
<b>Total Required Credits</b>				<b>1</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>20</b>	<b>50</b>
<b>Semester : 2</b>									
<b>Generic Core Courses</b>									
T7057	070144201	Advanced Databases		3	90	60	0	0	150
T7068	070144202	Intelligent Systems		3	90	60	0	0	150
F7002	070144203	Blockchain Technologies		3	150	0	0	0	150
TE7101	070144204	Internet of Things		3	90	60	0	0	150
TE7100	070144205	Statistical Programming		2	60	40	0	0	100
TE7109	070144206	Research Methodology in engineering		2	60	40	0	0	100
T7802	070144207	Seminar		2	0	0	60	40	100
T7058	070144208	Advanced Databases Lab		1	0	0	30	20	50
T7069	070144209	Intelligent Systems Lab		1	0	0	30	20	50



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T7528	070144210	Internet of Things Lab		1	0	0	30	20	50
TE7124	070144211	Technical writing Lab		1	0	0	30	20	50
T4005	070144212	Integrated Disaster Management *		0	0	0	0	0	Non Letter Grade
<b>Total</b>				<b>22</b>	<b>540</b>	<b>260</b>	<b>180</b>	<b>120</b>	<b>1100</b>
<b>Generic Elective Courses Group</b>									
T3309	070144213	Big Data Analytics		3	90	60	0	0	150
TE7097	070144214	Neural Network		3	90	60	0	0	150
TE7110	070144215	Distributed Systems and Cloud Computing		3	90	60	0	0	150
<b>Total Required Credits</b>				<b>3</b>	<b>90</b>	<b>60</b>	<b>0</b>	<b>0</b>	<b>150</b>
<b>Generic Elective Courses Group</b>									
TE7111	070144216	Distributed Systems and Cloud Computing Lab		1	0	0	30	20	50
TE7112	070144217	Neural Networks Lab		1	0	0	30	20	50
TE7107	070144218	Big Data Analytics Lab		1	0	0	30	20	50
<b>Total Required Credits</b>				<b>1</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>20</b>	<b>50</b>
<b>Semester : 3</b>									
<b>Generic Core Courses</b>									
TE7710	070144301	Dissertation Phase 1		10	300	200	0	0	500
F7015	070144302	Advanced Cyber Security		4	200	0	0	0	200
T4005	070144304	Integrated Disaster Management *		0	0	0	0	0	Non Letter Grade
<b>Total</b>				<b>14</b>	<b>500</b>	<b>200</b>	<b>0</b>	<b>0</b>	<b>700</b>
<b>Semester : 4</b>									
<b>Generic Core Courses</b>									
TE7714	070144401	Dissertation Phase 2		14	420	280	0	0	700
T0100	070144402	Research Publication *		0	0	0	0	0	Non Letter Grade
<b>Total</b>				<b>14</b>	<b>420</b>	<b>280</b>	<b>0</b>	<b>0</b>	<b>700</b>



Celebrating 50 Years of Excellence

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Semester	Internal Credits	External Credits	Total Credits	Total Marks
Semester 1	9	17	26	1300
Semester 2	3	23	26	1300
Semester 3	4	10	14	700
Semester 4	0	14	14	700
<b>Total</b>	<b>16</b>	<b>64</b>	<b>80</b>	<b>4000</b>