

**Symbiosis Institute of Technology, Pune**  
**Master of Technology (Artificial Intelligence and Machine Learning)**  
**Programme Structure 2025-2027**

1.	<b>OBJECTIVE</b>	To generate competent manpower in the emerging areas of AI and Machine Learning. To inculcate among the students an aptitude for engineering and research in the area of AI and ML for generation of better and smarter solutions to real world problems.				
2.	<b>DURATION (IN MONTHS)</b>	24 (Full Time)				
3.	<b>INTAKE</b>	30				
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		25	
5.	<b>ELIGIBILITY</b>	Engineering graduate (B. E./B.Tech) from any recognized 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 any engineering discipline.				
6.	<b>SELECTION PROCEDURE</b>	GATE score or Entrance Test on python programming or equivalent programming language for non-GATE candidates				
7.	<b>MEDIUM OF INSTRUCTION</b>	English				
8.	<b>PROGRAMME PATTERN</b>	Semester				
9.	<b>COURSE &amp; SPECIALISATION</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 (Amount in INR)</b>		250000	20000	270000	
	<b>International Students</b>	<b>NRI/ PIO/ OCI Category (Amount in US\$)</b>	4700	275	4975	
		<b>Foreign National Category (Amount in US\$)</b>	1950	275	2225	
11.	<b>ASSESSMENT</b>	The courses will have 60% Continuous Assessment and 40% End Semester [University] examination however, some courses (not more than 30% of the total programme credits) may have 100% Continuous Assessment.				

12.	<b>STANDARD OF PASSING</b>	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 Continuous Assessment End Semester 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</b>	Master of Technology (Artificial Intelligence and Machine Learning) will be awarded at the end of semester 4 examination by taking into consideration the performance of all semester examinations after obtaining minimum 4.00 CGPA out of 10.00 CGPA.

**14. CLASSIFICATION OF CREDITS**

Semester	Generic Core	Generic Elective	Specialisation Core	Specialisation Elective	Open Elective	Mandatory Non-Credit Course/s	Non-Credit Audit Course/s	Total
<b>Common</b>								
1	17	5	0	0	0	0	As per the student's choice	22
2	19	5	0	0	0	0		24
3	16	0	0	0	0	2 *		16
4	18	0	0	0	0	0		18
<b>Total</b>	<b>70</b>	<b>10</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>80</b>

\* Satisfactory completion of non credit courses 'Health and Wellness' and '*Vasudhaiva Kutumbakam*' is mandatory for award of degree.

The revised programme structure supersedes the previously approved programme structure dated 20/09/2025 for the programme.

**Additional Note:** #Health and Wellness Module I and Module II will be conducted during the semesters mentioned in the programme structure. However, the course will be listed on the students' grade sheets as "Health and Wellness" in the semester in which the institute's course code is officially assigned.

This Programme Structure is aligned with the norms laid down by the University and is approved by the Academic Council.  
Hereafter changes (if any) which conform to the policy on "Curriculum Development and Review" would be permissible, subject to revision of the Programme Structure, following the specified processes.

Director - 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>												
TEE7035	0701490101	Research Methodology in Engineering	PC	2	0	0	0	0	100	0	2	100
TE7495	0701490102	Programming in Python	PC	0	0	4	60	40	0	0	2	100
TEE7245	0701490103	Maths and Statistics for Data Science	PC	3	0	2	30	20	90	60	4	200
TEE7275	0701490104	Machine Learning Algorithms and Advances	PC	3	0	2	30	20	90	60	4	200
TEE7282	0701490105	SQL and NoSQL for Data Analysis	PC	0	0	2	50	0	0	0	1	50
TEE7199	0701490106	Exploratory Data Analysis and Visualization	PC	0	0	4	100	0	0	0	2	100
TEE7266	0701490107	Cloud Computing Essentials for Artificial Intelligence	PC	0	0	4	60	40	0	0	2	100
TH4788		Health and Wellness Module I #	MC	0	0	0	0	0	0	0	0	0
<b>Total</b>				<b>8</b>	<b>0</b>	<b>18</b>	<b>330</b>	<b>120</b>	<b>280</b>	<b>120</b>	<b>17</b>	<b>850</b>
<b>Generic Elective - I (Choose any one course)</b>												
TEE7267	0701490108	Data Engineering Essentials	PE	2	0	2	30	20	60	40	3	150
TEE7270	0701490109	Full Stack Development and Applications	PE	2	0	2	30	20	60	40	3	150
TEE7279	0701490110	Quantum Computing Fundamentals	PE	2	0	2	30	20	60	40	3	150
<b>Total Required Credits</b>							<b>30</b>	<b>20</b>	<b>60</b>	<b>40</b>	<b>3</b>	<b>150</b>
<b>Generic Elective - II (Choose any one course)</b>												
TEE7263	0701490111	Artificial Intelligence for Cyber Security	PE	2	0	0	0	0	100	0	2	100
TEE7272	0701490112	Geospatial Data Analytics	PE	2	0	0	0	0	100	0	2	100
TEE7264	0701490113	Artificial Intelligence for Robotics and Automation	PE	2	0	0	0	0	100	0	2	100
<b>Total Required Credits</b>							<b>0</b>	<b>0</b>	<b>100</b>	<b>0</b>	<b>2</b>	<b>100</b>
<b>Semester : 2</b>												
<b>Generic Core Courses</b>												
TEE7273	0701490201	Introduction to Deep Learning	PC	3	0	2	30	20	90	60	4	200
TEE7277	0701490202	Natural Language Processing and Applications	PC	3	0	2	30	20	90	60	4	200
TEE7276	0701490203	Machine Vision	PC	3	0	2	30	20	90	60	4	200
TEE7409	0701490204	AI System Design with Ethics	PC	3	0	2	30	20	90	60	4	200
F7115	0701490205	Essentials of MLOps	PC	2	0	0	0	0	100	0	2	100

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				L	T	Lab	CA	ESE	CA	ESE		
THM6149	0701490206	Advanced Technical and Professional Communication Skills	HSMC	0	0	2	50	0	0	0	1	50
TH4789		Health and Wellness Module II #	MC	0	0	0	0	0	0	0	0	0
<b>Total</b>				<b>14</b>	<b>0</b>	<b>10</b>	<b>170</b>	<b>80</b>	<b>460</b>	<b>240</b>	<b>19</b>	<b>950</b>
<b>Generic Elective - I (Choose any one course)</b>												
TEE7280	0701490207	Reinforcement Learning and Applications	PE	2	0	2	30	20	60	40	3	150
TEE7274	0701490208	Large Language Models	PE	2	0	2	30	20	60	40	3	150
TEE7271	0701490209	Generative Adversarial Networks and Applications	PE	2	0	2	30	20	60	40	3	150
<b>Total Required Credits</b>							<b>30</b>	<b>20</b>	<b>60</b>	<b>40</b>	<b>3</b>	<b>150</b>
<b>Generic Elective - II (Choose any one course)</b>												
TEE7258	0701490210	AI in Fintech	PE	2	0	0	0	0	100	0	2	100
TEE7259	0701490211	AI in Healthcare	PE	2	0	0	0	0	100	0	2	100
TEE7281	0701490212	Responsible AI	PE	2	0	0	0	0	100	0	2	100
TEE7260	0701490213	AI in Industry 4.0	PE	2	0	0	0	0	100	0	2	100
<b>Total Required Credits</b>							<b>0</b>	<b>0</b>	<b>100</b>	<b>0</b>	<b>2</b>	<b>100</b>
<b>Semester : 3</b>												
<b>Generic Core Courses</b>												
F0004	0701490301	Flexi-Credit Course	PC	4	0	0	0	0	200	0	4	200
TE7935	0701490302	Research Paper Writing	PC	2	0	0	0	0	100	0	2	100
T7710	0701490303	Dissertation Phase 1	PIS	0	0	20	300	200	0	0	10	500
SMC001	0701490304	Vasudhaiva Kutumbakam *	MC	0	0	0	0	0	0	0		Mandatory Non-Credit Course 0
SMC003	0701490305	Health and Wellness *	MC	0	0	0	0	0	0	0		Mandatory Non-Credit Course 0
<b>Total</b>				<b>6</b>	<b>0</b>	<b>20</b>	<b>300</b>	<b>200</b>	<b>300</b>	<b>0</b>	<b>16</b>	<b>800</b>
<b>Semester : 4</b>												
<b>Generic Core Courses</b>												
F0002	0701490401	Flexi-Credit Course	PC	2	0	0	0	0	100	0	2	100

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				L	T	Lab	CA	ESE	CA	ESE		
TE7893	0701490402	Data Visualization Tools and Software	PC	0	0	4	60	40	0	0	2	100
T7714	0701490403	Dissertation Phase 2	PIS	0	0	28	420	280	0	0	14	700
<b>Total</b>				<b>2</b>	<b>0</b>	<b>32</b>	<b>480</b>	<b>320</b>	<b>100</b>	<b>0</b>	<b>18</b>	<b>900</b>

**Abbreviations (Nature)**

BS	Basic Sciences
ES	Engineering Sciences
HS	Humanities and Social Sciences
OE	Open Electives
PC	Professional Core
PE	Professional Elective
PIS	Project, Internship, Seminar
PD	Professional Development Course
MC	Mandatory Course
L	Lecture
T	Tutorial
CA	Continuous Assessment
ESE	End Semester Examination
GE	Generic Elective

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Semester	Continuous Assessment	End Semester Examination	Total Credits	Total Marks
Semester 1	7	15	22	1100
Semester 2	5	19	24	1200
Semester 3	6	10	16	800
Semester 4	2	16	18	900
<b>Total</b>	<b>20</b>	<b>60</b>	<b>80</b>	<b>4000</b>