

Symbiosis Institute of Technology, Pune
Master of Technology (Automotive
Technology) Programme Structure 2026-2028

1. OBJECTIVE	<p>The Government of India has undertaken multiple initiatives to promote the manufacturing and adoption of electric vehicles in the country. Hence, there will be tremendous demand for the student trained in Automotive, electric vehicles, hydrogen vehicles, drone technology, hyperloops technology, etc. and related areas. The aim of this Programme is:</p> <ul style="list-style-type: none"> - To generate competent manpower having in-depth theoretical and practical knowledge in the emerging areas of Automotive, electric vehicles, hydrogen vehicles, drone technology, hyperloops technology, etc. and related state of art Technology. - To inculcate among the students an aptitude for engineering and research in the area of Automotive technology for generation of better and smarter solutions to real world problems. 			
2. DURATION (IN MONTHS)	24 (Full Time)			
3. INTAKE	30			
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		25
5. ELIGIBILITY	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. SELECTION PROCEDURE	GATE score or Entrance Test or Professional experience of 2 years			
7. MEDIUM OF INSTRUCTION	English			
8. PROGRAMME PATTERN	Semester			
9. COURSE & SPECIALISATION	As per Annexure A			
10. FEE		Academic Fee p.a	Institute Deposit	Total

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	Indian Students (Amount in INR)	185000	20000	205000							
	International Students	NRI/ PIO/ OCI Category (Amount in US\$)	3650	3925							
		Foreign National Category (Amount in US\$)	1950	2225							
11. ASSESSMENT	The courses will have 60% Continuous Assessment and 40% Term End [University] examination however, some courses (not more than 30% of the total programme credits) may have 100% Continuous Assessment.										
12. STANDARD OF PASSING	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 the Continuous Assessment and Term End [University] 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	Master of Technology (Automotive Technology) 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 CGPA.										
14. CLASSIFICATION OF CREDITS											
Sem.	Basic Science	Eng. Science	Professional Core	Professional Elective	Humanities and Social Sciences including Management	Multidisciplinary Open Electives	Project / Internship / Seminar	Indian Knowledge System	Total Credits	No. of Mandatory Non-Credit Course/s	No. of Non-Credit Audit Course/s
1	6	0	13	0	1	0	0	0	20	1	1
2	0	0	21	0	0	0	0	0	21	1	1
3	0	0	2	9	0	0	10	0	21	1	1
4	0	0	4	0	0	0	14	0	18	0	0
* Satisfactory completion of non credit courses 'Health and Wellness' and ' <i>Vasudhaiva Kutumbakam</i> ' is mandatory for award of degree.											
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.											

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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		
Semester : 1												
Generic Core Courses												
TEE7235	0701520101	Applied Numerical Methods in Engineering	BS	3	0	2	30	20	90	60	4	200
TEE7035	0701520102	Research Methodology in Engineering	BS	2	0	0	0	0	100	0	2	100
P5884	0701520103	Automotive Engineering Systems	PC	3	0	0	0	0	90	60	3	150
P5885	0701520104	Power Electronics for Automobile	PC	3	0	2	30	20	90	60	4	200
TEE7332	0701520105	Modelling and Simulation of EHV	PC	0	0	4	100	0	0	0	2	100
P5992	0701520106	Python for Automobile Engineering	PC	3	0	2	50	0	90	60	4	200
THM6149	0701520107	Advanced Technical and Professional Communication Skills	HSMC	0	0	2	30	20	0	0	1	50
TH4788		Health and Wellness Module I #	MC	0	0	0	0	0	0	0	0	0
Total				14	0	12	240	60	460	240	20	1000
Semester : 2												
Generic Core Courses												
TEE7325	0701520201	EV Noise Vibration and Harshness	PC	4	0	2	30	20	120	80	5	250
TEE7318	0701520202	Automotive AI	PC	3	0	2	30	20	90	60	4	200
TE7987	0701520203	Autonomous and Connected Vehicles	PC	3	0	0	0	0	90	60	3	150
TE7985	0701520204	Automotive Safety and Cyber Security	PC	3	0	0	0	0	90	60	3	150
TE7989	0701520205	Electric and Hybrid Vehicles	PC	3	0	0	0	0	90	60	3	150
TE7991	0701520206	Automotive Embedded System	PC	3	0	0	0	0	90	60	3	150
TH4789		Health and Wellness Module II #	MC	0	0	0	0	0	0	0	0	0
Total				19	0	4	60	40	570	380	21	1050

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				L	T	Lab	CA	ESE	CA	ESE		
Semester 3 Generic Core Courses												
T7710	0701520301	Dissertation I	PIS	0	0	20	300	200	0	0	10	500
F0002	0701520302	Flexi-Credit Course	PC	2	0	0	0	0	100	0	2	100
SMC001	0701520303	Vasudhaiva Kutumbakam *	MC	0	0	0	0	0	0	0	Mandatory Non-Credit Course	0
SMC003	0701520304	Health and Wellness *	MC	0	0	0	0	0	0	0	Mandatory Non-Credit Course	0
Total				2	0	20	300	200	100	0	12	600
Generic Elective Course Group - I (Choose any one course)												
TE7980	0701520305	Powertrain Management Systems	PE	3	0	0	0	0	150	0	3	150
TE7979	0701520306	Automotive HVAC	PE	3	0	0	0	0	150	0	3	150
TE7994	0701520307	Vehicle Electronic Control Management System	PE	3	0	0	0	0	150	0	3	150
Total Required Credits							0	0	150	0	3	150
Generic Elective Course Group - II (Choose any one course)												
TE7990	0701520308	Testing and Certification of Automobile	PE	3	0	0	0	0	150	0	3	150
TE7986	0701520309	Vehicle Dynamics and Control	PE	3	0	0	0	0	150	0	3	150
TE7978	0701520310	Battery Management Systems	PE	3	0	0	0	0	150	0	3	150
Total Required Credits							0	0	150	0	3	150
Generic Elective Course Group - III (Choose any one course)												
TE7993	0701520311	Plug-in Electric Vehicles in Smart Grid	PE	3	0	0	0	0	150	0	3	150



TE7984	0701520312	Future Mobility Solution	PE	3	0	0	0	0	150	0	3	150	
TE7983	0701520313	Deep Neural Networks for Automotive Applications	PE	3	0	0	0	0	150	0	3	150	
Total Required Credits								0	0	150	0	3	150
Semester : 4													
Generic Core Courses													
T7714	0701520401	Dissertation II	PIS	0	0	28	420	280	0	0	14	700	
TE7935	0701520402	Research Paper Writing	PC	2	0	0	0	0	100	0	2	100	
F0002	0701520403	Flexi-Credit Course	PC	2	0	0	0	0	100	0	2	100	
Total				4	0	28	420	280	200	0	18	900	

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	4	16	20	1000
Semester 2	0	21	21	1050
Semester 3	11	10	21	1050
Semester 4	4	14	18	900
Total	19	61	80	4000