Symbiosis Institute of Technology, Pune
Master of Technology (Engineering Design) - Part Time
Programme Structure 2025-28

<table>
<tr><td>1.</td><td>OBJECTIVE</td><td colspan="5">This programme aims to:
1. Provide an opportunity to pursue an independent research project while benefitting from the support of expert supervision.
2. Develop an understanding of the research study, linking the research project directly to the candidate's current or future career interests, and obtain a taste of what PhD study might entail.
3. Encourage the multidisciplinary research
4. Strengthen the students' core knowledge and provide research training to contribute in the field of Science, Engineering and technology.
5. Enhance the research culture and industry-academia connect at Faculty of Engineering, SIU.</td></tr>
<tr><td>2.</td><td>DURATION (IN MONTHS)</td><td colspan="5">36 (Part Time)</td></tr>
<tr><td>3.</td><td>INTAKE</td><td colspan="5">18</td></tr>
<tr><td rowspan="4">4.</td><td rowspan="4">RESERVATION</td><td rowspan="2">I.Within the sanctioned intake</td><td>a) SC (In Percentage)</td><td>b) ST (In Percentage)</td><td colspan="2">c) Differently abled (In Percentage)</td></tr>
<tr><td>15</td><td>7.5</td><td colspan="2">3</td></tr>
<tr><td rowspan="2">II.Over and above the sanctioned intake</td><td colspan="2">a) Kashmiri Migrants (In Seats)</td><td colspan="2">b) International Students (In Percentage)</td></tr>
<tr><td colspan="2">2</td><td colspan="2">25</td></tr>
<tr><td>5.</td><td>ELIGIBILITY</td><td colspan="5">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. OR Master's degree in Science or Master's degree in Computer Applications (with Physics & Mathematics at Bachelor's level) or Master's degree in Computer Science (with Physics and Mathematics) at Bachelor's Level. b) UG + 2 years industry experience / Research experience in a research lab.</td></tr>
<tr><td>6.</td><td>SELECTION PROCEDURE</td><td colspan="5">GATE score or Entrance Test Entrance Test conducted at the Institute followed by a Personal Interview for non-GATE candidates.</td></tr>
<tr><td>7.</td><td>MEDIUM OF INSTRUCTION</td><td colspan="5">English</td></tr>
<tr><td>8.</td><td>PROGRAMME PATTERN</td><td colspan="5">Semester</td></tr>
<tr><td>9.</td><td>COURSE & SPECIALISATION</td><td colspan="5">As per Annexure A</td></tr>
<tr><td>10.</td><td>FEE</td><td></td><td>Academic Fee p.a</td><td>Institute Deposit</td><td colspan="2">Total</td></tr>
<tr><td colspan="6"></td></tr>
</table>

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	Indian Students (Amount in INR)		26600	20000	46600
	International Students	**NRI/ PIO/ OCI Category (Amount in US$)**	550	275	825
		Foreign National Category (Amount in US$)	375	275	650
11.	**ASSESSMENT**	All internal courses will have 100% component as internal evaluation at the institute level. All external courses will have 60% internal component and 40% component as external [University] examination. The internal and external will be separate heads of passing.			
12.	**STANDARD OF PASSING**	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 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.	**AWARD OF DEGREE**	Master of Technology (Engineering Design) By Research will be awarded at the end of semester VI 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**				

Semester	**Generic Core**	**Generic Elective**	**Specialisa-tion Core**	**Specialisa-tion Elective**	**Open Elective**	**Mandatory Non-Credit Course/s**	**Non-Credit Audit Course/s**	**Total**
Common								
1	4	5	0	0	0	0	As per the student's choice	9
2	8	5	0	0	0	1 *		13
3	14	0	0	0	0	0		14
4	18	0	0	0	0	0		18
5	12	0	0	0	0	0		12
6	14	0	0	0	0	0		14
Total	**70**	**10**	**0**	**0**	**0**	**0**		**80**

* Satisfactory completion of the non letter grade course '*Vasudhaiva Kutumbakam*' is mandatory for award of degree.

This Programme Structure is aligned with the norms laid down by the University and is approved by the Academic Council and Executive 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	Lab	CA	ESE	CA	ESE		
Semester : 1												
Generic Core Courses												
TE7919	0701510101	Research Methodology and Techniques		1	0	0	0	0	30	20	1	50
TE7917	0701510102	Quantitative Techniques		2	0	0	0	0	60	40	2	100
T7801	0701510103	Technical Presentation and Discussion		1	0	0	0	0	50	0	1	50
Total				**4**	**0**	**0**	**0**	**0**	**140**	**60**	**4**	**200**
Independent Study Module - I Courses Group (Choose any one course)												
ISM7008	0701510104	Generative AI and Machine Learning		5	0	0	250	0	0	0	5	250
ISM7002	0701510105	5G NR Air Interface		5	0	0	250	0	0	0	5	250
ISM7017	0701510106	Mechatronics		5	0	0	250	0	0	0	5	250
ISM7012	0701510107	Hydrogen: Key Concepts and Use in Green Technologies		5	0	0	250	0	0	0	5	250
ISM7005	0701510108	Artificial Intelligence and Machine Learning		5	0	0	250	0	0	0	5	250
ISM7019	0701510109	Understanding Design		5	0	0	250	0	0	0	5	250
ISM7007	0701510110	Deep Learning		5	0	0	250	0	0	0	5	250
ISM7014	0701510111	Machine Learning		5	0	0	250	0	0	0	5	250
Total Required Credits							**250**	**0**	**0**	**0**	**5**	**250**
Semester : 2												
Generic Core Courses												
TE7918	0701510201	Research Ethics and Integrity		1	0	0	0	0	50	0	1	50
SWM01	0701510202	Swayam Course		2	0	0	0	0	100	0	2	100
SWM03	0701510203	Swayam Course		0	0	10	150	100	0	0	5	250
SMC001	0701510204	*Vasudhaiva Kutumbakam **		0	0	0	0	0	0	0	Mandatory Non-Credit Course	0
Total				**3**	**0**	**10**	**150**	**100**	**150**	**0**	**8**	**400**
Independent Study Module - II (Choose any one course)												
ISM7013	0701510205	Impact of AI on Financial Efficienty and Decision Making		5	0	0	250	0	0	0	5	250
ISM7016	0701510206	Machine Learning and NLP with MLOps and Deployment		5	0	0	250	0	0	0	5	250
ISM7003	0701510207	Agentic AI		5	0	0	250	0	0	0	5	250
ISM7015	0701510208	Machine Learning		5	0	0	250	0	0	0	5	250

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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		
ISM7011	0701510209	Hydrogen: Applications in Green Technologies		5	0	0	250	0	0	0	5	250
ISM7018	0701510210	The Mechanics of Composite Materials		5	0	0	250	0	0	0	5	250
ISM7006	0701510211	Cognitive Psychology		5	0	0	250	0	0	0	5	250
ISM7004	0701510212	Artificial Intelligence		5	0	0	250	0	0	0	5	250
Total Required Credits							**250**	**0**	**0**	**0**	**5**	**250**
Semester : 3												
Generic Core Courses												
F0001	0701510301	Flexi-Credit Course		1	0	0	0	0	50	0	1	50
T7807	0701510302	Project - I		0	0	14	210	140	0	0	7	350
T7804	0701510303	Research Publication - I		0	0	8	120	80	0	0	4	200
T7802	0701510304	Report - I		0	0	2	60	40	0	0	2	100
Total				**1**	**0**	**24**	**390**	**260**	**50**	**0**	**14**	**700**
Semester : 4												
Generic Core Courses												
T7814	0701510401	Research Presentation - I		0	0	28	420	280	0	0	14	700
T7802	0701510402	Project - II (Technical Talk)		0	0	4	60	40	0	0	2	100
T7802	0701510403	Report - II		0	0	4	60	40	0	0	2	100
Total				**0**	**0**	**36**	**540**	**360**	**0**	**0**	**18**	**900**
Semester : 5												
Generic Core Courses												
T7802	0701510501	Project - III (Technical Talk)		0	0	4	60	40	0	0	2	100
T7808	0701510502	Research Presentation - II		0	0	16	240	160	0	0	8	400
T7802	0701510503	Report - III		0	0	4	60	40	0	0	2	100
Total				**0**	**0**	**24**	**360**	**240**	**0**	**0**	**12**	**600**
Semester : 6												
Generic Core Courses												
T7810	0701510601	Thesis		0	0	20	300	200	0	0	10	500
T7804	0701510602	Research Publication - II		0	0	8	120	80	0	0	4	200
Total				**0**	**0**	**28**	**420**	**280**	**0**	**0**	**14**	**700**

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Annexure A

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
Common				
Semester 1	6	3	9	450
Semester 2	8	5	13	650
Semester 3	1	13	14	700
Semester 4	0	18	18	900
Semester 5	0	12	12	600
Semester 6	0	14	14	700
Total	**15**	**65**	**80**	**4000**