



Symbiosis Institute of Technology, Pune
Master of Technology (Computer Aided Design and Manufacture)
Programme Structure 2020-22

1.	OBJECTIVE	To generate competent manpower in the emerging areas of Computer Aided Design and Manufacturing Technology. To inculcate among the students an aptitude for engineering and research for the furthering of knowledge in the chosen field.			
2.	DURATION (IN MONTHS)	24 (Full Time)			
3.	INTAKE	18			
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	15	
5.	ELIGIBILITY	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 Mechanical /Production/ Industrial/ Automobile/ Aeronautical or equivalent.			
6.	SELECTION PROCEDURE	GATE score or Entrance Test for non-GATE candidates			
7.	MEDIUM OF INSTRUCTION	English			
8.	PROGRAMME PATTERN	Semester			
9.	COURSE & SPECIALIZATION	As per Annexure A			
10.	FEE		Academic Fee p.a	Institute Deposit	Total
		Indian Students	185000	20000	205000
		International Students (USD equivalent to INR)	280000	20000	300000
11.	ASSESSMENT	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.	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 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 10
13.	AWARD OF DEGREE/ DIPLOMA/ CERTIFICATE	Master of Technology (Computer Aided Design and Manufacture) 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. CLASSIFICATION OF CREDITS

Semester	Generic Core	Generic Elective	Specialization Core	Specialization Elective	Open Elective	Audit	Total
1	21	3	0	0	0	0	24
2	25	3	0	0	0	1*	28
3	14	0	0	0	0	2*	14
4	14	0	0	0	0	0	14
Total	74	6	0	0	0	0	80

* Satisfactory completion of the non letter grade courses 'Integrated Disaster Management', 'Research Publication' 'Certificate in COVID-19 Care for the Community' is mandatory for award of degree.

The revised programme structure supersedes the previously approved programme structure dated 08/09/2021 for the programme.

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.

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	La b	CA	ESE	CA	ESE		
Semester : 1												
Generic Core Courses												
T7126	0701420101	Computer Aided Production, Planning & Control	PC	4	0	0	0	0	120	80	4	200
T2208	0701420102	Research Methodology	PC	4	0	0	0	0	120	80	4	200
TE7137	0701420103	Computational Methods and Optimization	PC	4	0	0	0	0	120	80	4	200
T7927	0701420104	Computer Aided Design	PC	3	0	0	0	0	90	60	3	150
T7667	0701420105	Computer Aided Design Lab	PC	0	0	4	60	40	0	0	2	100
T7674	0701420106	Cyber Security	ES	2	0	0	0	0	100	0	2	100
TE7138	0701420107	Computational Methods and Optimization Lab	PC	0	0	2	30	20	0	0	1	50
TE7139	0701420108	Communication Skills Lab	HS	0	0	2	30	20	0	0	1	50
Total				17	0	8	120	80	550	300	21	1050
Generic Elective Courses Group												
TE7140	0701420109	Advanced Stress Analysis	PE	3	0	0	0	0	90	60	3	150
TE7141	0701420110	Systems Modelling and Control	PE	3	0	0	0	0	90	60	3	150
Total Required Credits							0	0	90	60	3	150
Semester : 2												
Generic Core Courses												
T7115	0701420201	Advanced Computational Fluid Dynamics	PC	4	0	0	0	0	120	80	4	200
T7117	0701420202	Advanced Finite Element Method	PC	4	0	0	0	0	120	80	4	200
T7671	0701420203	Seminar	PIS	0	0	8	120	80	0	0	4	200
F7018	0701420204	Strategic Innovation and Technology Management	PC	3	0	0	0	0	150	0	3	150
TE7142	0701420205	Computer Aided Manufacturing	PC	3	0	0	0	0	90	60	3	150
TE7143	0701420206	Advanced Finite Element Method Lab	PC	0	0	4	60	40	0	0	2	100
TE7144	0701420207	Advanced Computational Fluid Dynamics Lab	PC	0	0	4	60	40	0	0	2	100
T7125	0701420208	Computer Aided Manufacturing Lab	PC	0	0	2	30	20	0	0	1	50
F7017	0701420209	Additive Manufacturing	PC	1	0	0	0	0	50	0	1	50
TE7145	0701420210	Technical Writing Lab	ES	0	0	2	30	20	0	0	1	50
T4005	0701420211	Integrated Disaster Management *		0	0	0	0	0	0	0	Non Letter Grade	0



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				L	T	Lab	CA	ESE	CA	ESE		
Total				15	0	20	300	200	530	220	25	1250
Generic Elective Courses Group												
TE7146	0701420212	Advanced Industrial Automation & Robotics	PE	3	0	0	0	0	90	60	3	150
T7127	0701420213	Emerging Concepts & Techniques in Manufacturing Management	PE	3	0	0	0	0	90	60	3	150
Total Required Credits							0	0	90	60	3	150
Semester : 3												
Generic Core Courses												
TE7710	0701420301	Dissertation Phase 1	PIS	0	0	20	0	0	300	200	10	500
F7012	0701420302	Industry 4.0	PC	3	0	0	0	0	150	0	3	150
F7032	0701420303	Robotic Operating System	PC	1	0	0	0	0	50	0	1	50
T0100	0701420304	Research Publication *		0	0	0	0	0	0	0	Non Letter Grade	0
TH4272	0701420305	Certificate in COVID-19 Care for the Community *		0	0	0	0	0	0	0	Non Letter Grade	0
Total				4	0	20	0	0	500	200	14	700
Semester : 4												
Generic Core Courses												
T7714	0701420401	Dissertation Phase 2	PIS	0	0	28	420	280	0	0	14	700
Total				0	0	28	420	280	0	0	14	700



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Semester	Internal Credits	External Credits	Total Credits	Total Marks
Semester 1	2	22	24	1200
Semester 2	4	24	28	1400
Semester 3	4	10	14	700
Semester 4	0	14	14	700
Total	10	70	80	4000