

SYMBIOSIS INSTITUTE OF TECHNOLOGY
MASTER OF TECHNOLOGY (COMPUTER AIDED DESIGN AND
MANUFACTURE)
PROGRAMME STRUCTURE 2015-17

- 1. OBJECTIVES**
 - 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** Two Years Full Time

- 3. INTAKE** 18 Students

- 4. RESERVATION**
 - I. Within the sanctioned intake:
 - a) Scheduled Castes-15%
 - b) Scheduled Tribes-7.5%
 - c) Differently abled-3%

 - II. Over and above the sanctioned intake:
 - a) Kashmiri Migrants - 2 Seats
 - b) International Students - 15%

- 5. ELIGIBILITY** At least 50% marks in B.Tech./B.E in Mechanical, Production, Industrial, Automobile, Aeronautical or Metallurgical (45% for SC/ST candidates)

- 6. SELECTION PROCEDURE** GATE score or Entrance Test for non-GATE candidates

- 7. MEDIUM OF INSTRUCTION** English

- 8. PROGRAM PATTERN** Semester Pattern - 4 Semesters

- 9. COURSES& SPECIALIZATION** As per Annexure A

10. FEE**Indian Students**

Academic Fee p.a.	Rs. 1,50,000
Institute Deposit	Rs. 20,000
Total	Rs.1,70,000

International Students

Academic Fee p.a.	Rs. 2,25,000
Institute Deposit	Rs. 20,000
Total	Rs.2,45,000

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 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 (Computer Aided Design and Manufacture) M. Tech. (CAD & M) degree 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.

Annexure A
Semester I

Catalog Course Code	Course Code	Course Title	Nature of Course	Teaching Scheme			Examination Scheme Marks				Credits	Total Marks
				L	T	Lab	Practical		CA	ESE		
							CA	ESE				
T7135	070142101	Computer Graphics and Data Structures	C	3	-	-	-	-	60	90	3	150
T7100	070142102	Mechatronics	C	4	-	-	-	-	80	120	4	200
T7004	070142103	Advanced Numerical Methods in Engineering	ES	3	-	-	-	-	60	90	3	150
T7126	070142104	Computer Aided Production Planning and Control	C	4	-	-	-	-	80	120	4	200
T7122	070142105	Computer Aided Design	C	4	-	-	-	-	80	120	4	200
T7136	070142106	Computer Graphics and Data Structure Lab	C	-	-	2	20	30	-	-	1	50
T7101	070142107	Mechatronics Lab	C	-	-	2	20	30	-	-	1	50
T7005	070142108	Advanced Numerical Method in Engineering Lab	C	-	-	2	20	30	-	-	1	50
T7123	070142109	Computer Aided Design Lab	C	-	-	2	20	30	-	-	1	50
T7674	070142110	Cyber Security	GP	2	-	-	-	-	100	-	2	100
Elective-I (choose any one)												
T7121	070142111	Advanced Mechanical System Design	C	3	-	-	-	-	60	90	3	150
T7128	070142112	Engineering Optimization Techniques	C	3	-	-	-	-	60	90	3	150
T7130	070142113	Product Design and Development	C	3	-	-	-	-	60	90	3	150
			Total	23	-	8	80	120	520	630	27	1350

Semester II

Catalog Course Code	Course Code	Course Title	Nature of Course	Teaching Scheme			Examination Scheme Marks				Credits	Total Marks
				L	T	Lab	Practical		CA	ESE		
							CA	ESE				
T7124	070142201	Computer Aided Manufacturing	C	4	-	-	-	-	80	120	4	200
T7026	070142202	Research Methodology in Engineering	PD	3	-	-	-	-	60	90	3	150
T7117	070142203	Advanced Finite Element Method	C	4	-	-	-	-	80	120	4	200
T7119	070142204	Advanced Industrial Automation and Robotics	C	4	-	-	-	-	80	120	4	200
T7115	070142205	Advanced Computational Fluid Dynamics	C	4	-	-	-	-	80	120	4	200
T7127	070142206	Emerging Concepts and Techniques in Manufacturing Management	C	3	-	-	-	-	60	90	3	150
T7125	070142207	Computer Aided Manufacturing Lab	C	-	-	2	20	30	-	-	1	50
T7118	070142208	Advanced Finite Element Method Lab	C	-	-	2	20	30	-	-	1	50
T7116	070142209	Advanced Computational Fluid Dynamics Lab	C	-	-	2	20	30	-	-	1	50
Elective-II (choose any one)												
T7120	070142210	Advanced Materials	C	3	-	-	-	-	60	90	3	150
T7521	070142211	Artificial Intelligence and Neural Networks	C	3	-	-	-	-	60	90	3	150
T7129	070142212	Fracture and Failure Analysis	C	3	-	-	-	-	60	90	3	150
			Total	25	-	6	60	90	500	750	28	1400
T4005	070144213	*Integrated Disaster Management		-	-	-	-	-	-	-	-	Letter Grade

Semester III

Catalog Course Code	Course Code	Course Title	Nature of Course	Teaching Scheme			Examination Scheme Marks			Credits	Total Marks
				L	T	Lab	TW	CA	ESE		
T7809	070142301	M.Tech Project**	PD	-	-	-	-	180	270**	9	450
T7675	070142302	Review of Literature	PD	-	-	-	-	160	240**	8	400
T7677	070142303	Technical Writing and Seminars	PD					60	90	3	150
			Total	-	-	-	-	400	600	20	1000

** ESE would be Final VIVA-VOCE conducted by the institute

Semester IV

Catalog Course Code	Course Code	Course Title	Nature of Course	Teaching Scheme			Examination Scheme Marks			Credits	Total Marks
				L	T	Lab	TW	CA	ESE		
T7851	070142401	Thesis	PD	-	-	-	-	750	500	25	1250
			Total	-	-	-	-	750	500	25	1250

Summary

Semester	Internal Credits	External Credits	Total Credits	Total Marks
Semester I	02	25	27	1350
Semester II	-	28	28	1400
Semester III	-	20	20	1000
Semester IV	-	25	25	1250
Total	02	98	100	5000

*Integrated Disaster Management is mandatory for the award of degree.

C – Core Course

ID – Inter Disciplinary Course

ES – Engineering Science Course

PD – Professional Development Course

GP – General Proficiency Course

L – Lecture, T– Tutorial

TW – Term Work (Practical)

HA – Home Assignment

ESE – End Semester Examination

CA – Continuous Assessment