



Symbiosis Institute of Technology, Pune
Master of Technology (Geoinformatics and Surveying Technology)
Programme Structure 2021-23

1.	OBJECTIVE	To generate competent manpower in the emerging areas of Geoinformatics and Surveying 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	Candidate should be an Engineering Graduate (BE/B. Tech), M.Sc. Geoinformatics, M.Sc. Physics, M.Sc. Geology, M.Sc. Environmental Science, M.Sc. Mathematics, M.Sc. Agriculture or equivalent from any statutory university with a minimum of 50% marks (45% for SC/ST). Candidates appearing for final year examinations can also apply, but their admission will be subject to obtaining a minimum of 50% marks (45% for SC/ST) at qualifying examination.			
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	260000	20000	280000
		International Students (USD equivalent to INR)	390000	20000	410000
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.			
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 maximum of 10CGPA for the programme.					
13.	AWARD OF DEGREE/ DIPLOMA/ CERTIFICATE	Master of Technology (Geoinformatics and Surveying Technology) 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.	NATURE WISE DISTRIBUTION OF CREDITS						
Semester	Generic Core	Generic Elective	Specialization Core	Specialization Elective	Open Elective	Audit	Total
1	24	0	0	0	0	0	24
2	24	4	0	0	0	1*	28
3	14	0	0	0	0	1*	14
4	14	0	0	0	0	0	14
Total	76	4	0	0	0	0	80
* Satisfactory completion of the non letter grade courses 'Integrated Disaster Management' and 'Research Publication' 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. 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												
T7174	0701460101	Applied Statistics	MC	3	0	0	0	0	90	60	3	150
T7033	0701460102	Fundamentals of Remote Sensing	MC	3	0	0	0	0	90	60	3	150
TE7475	0701460103	Python for Geospatial Technology	MC	3	0	0	0	0	90	60	3	150
T7029	0701460104	Digital Photogrammetry	MC	2	0	0	0	0	100	0	2	100
T7031	0701460105	Fundamentals of Geographic Information Systems	MC	2	0	0	0	0	60	40	2	100
T7041	0701460106	Global Navigation Satellite System	MC	2	0	0	0	0	60	40	2	100
T7370	0701460107	Research Methodology in GIS	MC	2	0	0	0	0	60	40	2	100
T7053	0701460108	Surveying & Cartography	MC	2	0	0	0	0	60	40	2	100
TE7156	0701460109	Digital Photogrammetry Lab	MC	0	0	2	100	0	0	0	2	100
T7032	0701460110	Fundamentals of Geographic Information Systems Lab	MC	0	0	1	50	0	0	0	1	50
T7034	0701460111	Fundamentals of Remote Sensing Lab	MC	0	0	1	50	0	0	0	1	50
T7042	0701460112	Global Navigation Satellite System Lab	MC	0	0	1	50	0	0	0	1	50
Total				19	0	5	250	0	610	340	24	1200
Semester : 2												
Generic Core Courses												
T7057	0701460201	Advanced Databases	MC	3	0	0	0	0	90	60	3	150
T7051	0701460202	Spatial Modeling & Analysis	MC	3	0	0	0	0	90	60	3	150
TE7440	0701460203	Advance Python Programming for Spatial Analytics	MC	3	0	0	0	0	90	60	3	150
TE7528	0701460204	Digital Image Processing In RS	MC	3	0	0	0	0	90	60	3	150
T7049	0701460205	Spatial Data Base Management	MC	2	0	0	0	0	60	40	2	100
T7081	0701460206	Web GIS and Application Design	MC	2	0	0	0	0	60	40	2	100
T7674	0701460207	Cyber Security	MC	2	0	0	0	0	100	0	2	100
F0002	0701460208	Flexi-Credit Course	MC	2	0	0	0	0	100	0	2	100
T7050	0701460209	Spatial Data Base Management Lab	MC	0	0	1	50	0	0	0	1	50
T7052	0701460210	Spatial Modeling & Analysis	MC	0	0	1	50	0	0	0	1	50
T7082	0701460211	Web GIS and Application Design Lab	MC	0	0	1	50	0	0	0	1	50



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Catalog Course Code	Course Code	Course Title	Nature	Teaching Scheme			Practical		Examination Scheme Marks		Total Credits	Total
				L	T	Lab	CA	ESE	CA	ESE		
TE7661	0701460212	Digital Image Processing In RS Lab	MC	0	0	1	50	0	0	0	1	50
T4005	0701460213	Integrated Disaster Management *		0	0	0	0	0	0	0	Non Letter Grade	0
Total				20	0	4	200	0	680	320	24	1200
Generic Elective Courses Group- I												
T7039	0701460214	Geoinformatics Applications in Natural Resource Management	PE	2	0	0	0	0	100	0	2	100
T7037	0701460215	Geoinformatics Applications in Human Settlement	PE	2	0	0	0	0	100	0	2	100
T7045	0701460216	Land Surveying	PE	2	0	0	0	0	100	0	2	100
Total Required Credits							0	0	100	0	2	100
Generic Elective Courses Group-II												
T7187	0701460217	GIS for Health Care Management	PE	2	0	0	0	0	100	0	2	100
TE7150	0701460218	Geospatial Application in Agriculture	PE	2	0	0	0	0	100	0	2	100
TE7158	0701460219	Geoinformatics applications in Facility and Utility management	PE	2	0	0	0	0	100	0	2	100
Total Required Credits							0	0	100	0	2	100
Semester : 3												
Generic Core Courses												
TE7710	0701460301	Dissertation Phase 1	PIS	0	0	10	0	0	300	200	10	500
F0004	0701460302	Flexi-Credit Course	PC	4	0	0	0	0	200	0	4	200
T0100	0701460303	Research Publication *		0	0	0	0	0	0	0	Non Letter Grade	0
Total				4	0	10	0	0	500	200	14	700
Semester : 4												
Generic Core Courses												
TE7714	0701460401	Dissertation Phase 2	PIS	0	0	14	0	0	420	280	14	700
Total				0	0	14	0	0	420	280	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



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Semester	Internal Credits	External Credits	Total Credits	Total Marks
Semester 1	7	17	24	1200
Semester 2	12	16	28	1400
Semester 3	4	10	14	700
Semester 4	0	14	14	700
Total	23	57	80	4000