

Symbiosis Institute of Technology, Pune
Master of Technology (Geoinformatics)
Programme Structure 2025-2027

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		25	
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 & SPECIALISATION	As per Annexure A				
10.	FEE		Academic Fee p.a	Institute Deposit	Total	

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	Indian Students (Amount in INR)		295000	20000	315000			
	International Students	NRI/ PIO/ OCI Category (Amount in US\$)	5500	275	5775			
		Foreign National Category (Amount in US\$)	1950	275	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 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 Continuous Assessment and Term End examinations 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 (Geoinformatics) 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								
Semester	Generic Core	Generic Elective	Specialisation Core	Specialisation Elective	Open Elective	Mandatory Non-Credit Course/s	Non-Credit Audit Course/s	Total
Common								
1	26	0	0	0	0	0	As per the student's choice	26
2	28	2	0	0	0	1 *		30
3	10	0	0	0	0	1 *		10
4	14	0	0	0	0	0		14
Total	78	2	0	0	0	0		80
* Satisfactory completion of non credit courses 'Health and Wellness' and ' <i>Vasudhaiva Kutumbakam</i> ' is mandatory for award of degree.								
The revised programme structure supersedes the previously approved programme structure dated 18/08/2025 for the programme.								
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.								

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.

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												
T7033	0701460101	Fundamentals of Remote Sensing	MC	3	0	0	0	0	90	60	3	150
TEE7202	0701460102	Database concepts and SDBMS	MC	3	0	0	0	0	90	60	3	150
T7031	0701460103	Fundamentals of Geographic Information Systems	MC	2	0	0	0	0	60	40	2	100
T7370	0701460104	Research Methodology in GIS	MC	2	0	0	0	0	60	40	2	100
T7674	0701460105	Cyber Security	MC	2	0	0	0	0	100	0	2	100
T3662	0701460106	Web Design Technologies	MC	2	0	0	0	0	60	40	2	100
TE7922	0701460107	Applied Statistics	MC	2	0	0	0	0	60	40	2	100
TE7932	0701460108	Python for Geospatial Technology	MC	2	0	0	0	0	60	40	2	100
TE7926	0701460109	Global Navigation Satellite System	MC	2	0	0	0	0	60	40	2	100
T7032	0701460110	Fundamentals of Geographic Information Systems Lab	MC	0	0	2	50	0	0	0	1	50
T7034	0701460111	Fundamentals of Remote Sensing Lab	MC	0	0	2	50	0	0	0	1	50
TE7923	0701460112	Applied Statistics Lab	MC	0	0	2	50	0	0	0	1	50
TE7933	0701460113	Python for Geospatial Technology Lab	MC	0	0	2	50	0	0	0	1	50
TE7927	0701460114	Global Navigation Satellite System Lab	MC	0	0	2	50	0	0	0	1	50
TEE7201	0701460115	Database concepts and SDBMS Lab	MC	0	0	2	50	0	0	0	1	50
TH4788		Health and Wellness Module I #	MC	0	0	0	0	0	0	0	0	0
Total				20	0	12	300	0	640	360	26	1300
Semester : 2												
Generic Core Courses												
TE7447	0701460201	Spatial Big Data and Storage Analytics	PC	4	0	0	0	0	120	80	4	200
T7051	0701460202	Spatial Modeling and Analysis	MC	3	0	0	0	0	90	60	3	150
TEE7365	0701460203	Digital Image Processing in GIS	MC	3	0	0	0	0	60	40	2	100
T7029	0701460204	Digital Photogrammetry	MC	2	0	0	0	0	60	40	2	100
T7081	0701460205	Web GIS and Application Design	MC	2	0	0	0	0	60	40	2	100
F7123	0701460206	Digital Twin for Geospatial Technology	MC	2	0	0	0	0	100	0	2	100
TE7156	0701460207	Digital Photogrammetry Lab	MC	0	0	4	100	0	0	0	2	100

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				L	T	Lab	CA	ESE	CA	ESE		
TE7935	0701460208	Research Paper Writing	PC	2	0	0	0	0	100	0	2	100
TE7920	0701460209	Advance Python Programming for spatial Analytics	MC	2	0	0	0	0	60	40	2	100
TEE7024	0701460210	Machine Learning for Remote Sensing	MC	2	0	0	0	0	100	0	2	100
T7052	0701460211	Spatial Modeling and Analysis Lab	MC	0	0	2	50	0	0	0	1	50
T7082	0701460212	Web GIS and Application Design Lab	MC	0	0	2	50	0	0	0	1	50
TEE7366	0701460213	Digital Image Processing in GIS Laboratory	MC	0	0	2	100	0	0	0	2	100
TE7921	0701460214	Advance Python Programming for Spatial Analytics Lab	MC	0	0	2	50	0	0	0	1	50
SMC001	0701460215	Vasudhaiva Kutumbakam *	MC	0	0	0	0	0	0	0	Mandatory Non-Credit Course	0
TH4789		Health and Wellness Module II #	MC	0	0	0	0	0	0	0	0	0
Total				22	0	12	350	0	750	300	28	1400
Generic Elective Courses Group (Choose any one course)												
T7039	0701460216	Geoinformatics Applications in Natural Resource Management	PE	2	0	0	0	0	60	40	2	100
T7037	0701460217	Geoinformatics Applications in Human Settlement	PE	2	0	0	0	0	60	40	2	100
T7045	0701460218	Land Surveying	PE	2	0	0	0	0	60	40	2	100
T7187	0701460219	GIS for Health Care Management	PE	2	0	0	0	0	60	40	2	100
TE7150	0701460220	Geospatial Application in Agriculture	PE	2	0	0	0	0	60	40	2	100
TE7158	0701460221	Geoinformatics applications in Facility and Utility management	PE	2	0	0	0	0	60	40	2	100
Total Required Credits							0	0	60	40	2	100
Semester : 3												
Generic Core Courses												
T7710	0701460301	Dissertation Phase 1	PIS	0	0	20	0	0	300	200	10	500

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				L	T	Lab	CA	ESE	CA	ESE		
SMC003	0701460302	Health and Wellness *	MC	0	0	0	0	0	0	0	Mandatory Non-Credit Course	0
Total				0	0	20	0	0	300	200	10	500
Semester : 4												
Generic Core Courses												
T7714	0701460401	Dissertation Phase 2	PIS	0	0	28	0	0	420	280	14	700
Total				0	0	28	0	0	420	280	14	700

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	8	18	26	1300
Semester 2	12	18	30	1500
Semester 3	0	10	10	500
Semester 4	0	14	14	700
Total	20	60	80	4000