

Symbiosis School of Biological Sciences, Pune
Master of Science (Biotechnology)
Programme Structure 2025-27

1.	OBJECTIVE	1. Provide expertise in laboratory-based techniques. 2. Impart skill sets to formulate and execute independent research project. 3. Enable students with skill sets to carve a career as a researcher in the field of biotechnology. 4. Empower students with an ability to translate biotechnology research skill set to provide sustainable solutions to societal issues.				
2.	DURATION (IN MONTHS)	24 (Full Time)				
3.	INTAKE	40				
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	Graduate in Life Sciences/ Health Sciences/ Biotechnology/ any other Biological Sciences OR Graduate of Engineering in Biotechnology/ Graduate of Technology in Biotechnology from any recognized University/ Institution of National Importance and must have obtained a minimum of 50% marks or equivalent grade (45% or equivalent grade for Scheduled Caste/ Scheduled Tribes) at graduation				
6.	SELECTION PROCEDURE	Candidates will be selected on the basis of Personal Interaction				
7.	MEDIUM OF INSTRUCTION	English				
8.	PROGRAMME PATTERN	Semester				
9.	COURSE & SPECIALISATION	As per Annexure A Stream-A : M.Sc. Biotechnology Stream-B : M.Sc. Biotechnology (By Research)				
10.	FEE		Academic Fee p.a	Institute Deposit	Total	
M.Sc. (Biotechnology)						
	Indian Students (Amount in INR)		275000	20000	295000	
	International Students	NRI/ PIO/ OCI Category (Amount in US\$)	5100	275	5375	
		Foreign National Category (Amount in US\$)	1950	275	2225	

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M.Sc. Biotechnology (By Research) 1st Year								
	Indian Students (Amount in INR)			275000	20000	295000		
	International Students	NRI/ PIO/ OCI Category (Amount in US\$)		5100	275	5375		
		Foreign National Category (Amount in US\$)		1950	275	2225		
M.Sc. Biotechnology (By Research) 2nd Year								
	Indian Students (Amount in INR)			550000		550000		
	International Students	NRI/ PIO/ OCI Category (Amount in US\$)		10200		10200		
		Foreign National Category (Amount in US\$)		3900		3900		
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 [University] examination separately with a minimum Grade Point of 4.000 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 4.00 out of maximum of 10 CGPA for the programme.				
13.	AWARD OF DEGREE			Students opting for Stream-A of the programme will be awarded Master of Science (Biotechnology) at the end of semester 4 examination after taking into consideration the performance of all semester examinations after obtaining minimum 4.00 CGPA out of 10 CGPA. Students opting for Stream-B of the programme will be awarded Master of Science (Biotechnology) with specific mention of "By Research" on the degree certificate at the end of semester 4 examination after 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
Stream A								
1	20	0	0	0	0	0		20

2	20	0	0	0	0	1 *	As per the student's choice	20
3	14	6	0	0	0	1 *		20
4	20	0	0	0	0	0		20
Total	74	6	0	0	0	0		80
Stream B								
1	20	0	0	0	0	0	As per the student's choice	20
2	20	0	0	0	0	1 *		20
3	20	0	0	0	0	1 *		20
4	20	0	0	0	0	0		20
Total	80	0	0	0	0	0		80

* Satisfactory completion of non credit courses 'Health and Wellness' and '*Vasudhaiva Kutumbakam*' is mandatory for award of degree.

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	Specialisation	Credit	Continu-ous Assess-ment	Term End Examina-tion	Total Marks
Semester : 1							
Generic Core Courses							
TH4099	0403420101	Biochemistry		3	90	60	150
TH4110	0403420102	Practicals in Biochemistry		3	90	60	150
TH4098	0403420103	Advanced Molecular Biology		3	90	60	150
TH4107	0403420104	Microbiology		3	90	60	150
TH4114	0403420105	Practicals in Molecular Biology		3	90	60	150
TH4588	0403420106	Research Methodology and Biostatistics		3	90	60	150
TH4584	0403420107	Genetic Analysis		2	60	40	100
TH4788		Health and Wellness Module I #		0	0	0	0
Total				20	600	400	1000
Semester : 2							
Generic Core Courses							
TH4113	0403420201	Practicals in Microbiology		3	90	60	150
TH4589	0403420202	Advanced Immunology		3	90	60	150
TH4101	0403420203	Cell Biology		3	90	60	150
TH4586	0403420204	Genetic Engineering		3	90	60	150
TH4108	0403420205	Practicals in Animal Tissue Culture		2	60	40	100
TH4587	0403420206	Practicals in Recombinant DNA Technology		2	60	40	100
TH4585	0403420207	Practicals in Bioinformatics		2	60	40	100
TH4583	0403420208	Bioinformatics		2	60	40	100
SMC001	0403420209	<i>Vasudhaiva Kutumbakam</i> *		0	0	0	Mandatory Non-Credit Course
TH4789		Health and Wellness Module II #		0	0	0	0
Total				20	600	400	1000
Semester : 3							
Generic Core Courses							
SMC003	0403420301	Health and Wellness *		0	0	0	Mandatory Non-Credit Course
Total				0	0	0	0
Stream - A							
Generic Core Courses							
TH4100	0403420302	Bioprocess Engineering	STREAM-A	3	90	60	150

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Catalog Course Code	Course Code	Course Title	Specialisation	Credit	Continu ous Asses ment	Term End Examina tion	Total Marks
TH4109	0403420303	Practicals in Bioanalytical Techniques	STREAM-A	3	90	60	150
TH4112	0403420304	Practicals in Immunology and Virology	STREAM-A	3	90	60	150
TH4118	0403420305	Virology	STREAM-A	3	90	60	150
TH4106	0403420306	Introduction to Laboratory Animal Science	STREAM-A	2	60	40	100
Total Required Credits				14	420	280	700
STREAM-A (Generic Elective Course Group (Choose any one Group 1 OR 2))							
Generic Elective Courses Group - 1							
TH4582	0403420307	Genomics and Proteomics	STREAM-A	2	60	40	100
TH4102	0403420308	Environmental Biotechnology	STREAM-A	2	60	40	100
TH4792	0403420309	Practicals in Genomics and Proteomics	STREAM-A	2	60	40	100
Total Required Credits				6	180	120	300
Generic Elective Courses Group - 2							
TH4117	0403420310	Stem Cell Biology	STREAM-A	2	60	40	100
TH4791	0403420311	Biomaterials and Tissue Engineering	STREAM-A	2	60	40	100
T1656	0403420312	Intellectual Property Rights	STREAM-A	2	60	40	100
Total Required Credits				6	180	120	300
Stream-B							
Generic Core Course (By Research)							
T4820	0403420313	Project (Part I)	STREAM-B	20	600	400	1000
Total Required Credits				20	600	400	1000
Semester : 4							
Stream - A							
Generic Elective Course Group (Choose any one course)							
T4820	0403420401	Project		20	600	400	1000
T4920	0403420402	Internship		20	600	400	1000
Total Required Credits				20	600	400	1000
Stream - B							
Generic Core Course (By Research)							
T4820	0403420403	Project (Part II)		20	600	400	1000
Total Required Credits				20	600	400	1000

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Semester	Continuous Assessment	Term End Examination	Total Credits	Total Marks
STREAM-A				
Semester 1	0	20	20	1000
Semester 2	0	20	20	1000
Semester 3	0	20	20	1000
Semester 4	0	20	20	1000
Total	0	80	80	4000
STREAM-B				
Semester 1	0	20	20	1000
Semester 2	0	20	20	1000
Semester 3	0	20	20	1000
Semester 4	0	20	20	1000
Total	0	80	80	4000