

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

1.	<b>OBJECTIVE</b>	1. Provide expertise in laboratory-based biochemical 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 biochemistry. 4. Empower students with an ability to translate biochemistry research skill set to provide sustainable solutions to societal issues.				
2.	<b>DURATION (IN MONTHS)</b>	24 (Full Time)				
3.	<b>INTAKE</b>	30				
4.	<b>RESERVATION</b>	<b>I. Within the sanctioned intake</b>	<b>a) SC (In Percentage)</b>	<b>b) ST (In Percentage)</b>	<b>c) Differently abled (In Percentage)</b>	
			15	7.5	3	
		<b>II. Over and above the sanctioned intake</b>	<b>a) Kashmiri Migrants (In Seats)</b>		<b>b) International Students (In Percentage)</b>	
			2		25	
5.	<b>ELIGIBILITY</b>	Graduate in Science with Chemistry as one of the subjects in the third year OR Graduate in Life Sciences/ Health Sciences/ Biotechnology/ any other Biological Science from any recognized University/ Institution of National Importance with a minimum of 50% marks or equivalent grade (45% or equivalent grade for Scheduled Caste/Scheduled Tribes)				
6.	<b>SELECTION PROCEDURE</b>	Candidates will be selected on the basis of Personal Interaction				
7.	<b>MEDIUM OF INSTRUCTION</b>	English				
8.	<b>PROGRAMME PATTERN</b>	Semester				
9.	<b>COURSE &amp; SPECIALISATION</b>	As per Annexure A				
10.	<b>FEE</b>		<b>Academic Fee p.a</b>	<b>Institute Deposit</b>	<b>Total</b>	
	<b>Indian Students (Amount in INR)</b>		240000	20000	260000	
	<b>International Students</b>	<b>NRI/ PIO/ OCI Category (Amount in US\$)</b>	4700	275	4975	
		<b>Foreign National Category (Amount in US\$)</b>	1950	275	2225	
11.	<b>ASSESSMENT</b>	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.	<b>STANDARD OF PASSING</b>	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.	<b>AWARD OF DEGREE</b>	Master of Science (Biochemistry) 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
<b>Common</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	0	20	0	0	0	0		20
<b>Total</b>	<b>60</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>		<b>80</b>

\* 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 and Executive 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	Continuous Assessment	Term End Examination	Total Marks
<b>Semester : 1</b>							
<b>Generic Core Courses</b>							
TH4098	0403470101	Advanced Molecular Biology		3	90	60	150
TH4425	0403470102	Biomolecules		3	90	60	150
TH4107	0403470103	Microbiology		3	90	60	150
TH4275	0403470104	Practicals in Biochemical Techniques		3	90	60	150
TH4274	0403470105	Practicals in Microbiology and Molecular Biology		3	90	60	150
TH4588	0403470106	Research Methodology and Biostatistics		3	90	60	150
TH4584	0403470107	Genetic Analysis		2	60	40	100
TH4788		Health and Wellness Module I #		0	0	0	Mandatory Non-Credit Course
<b>Total</b>				<b>20</b>	<b>600</b>	<b>400</b>	<b>1000</b>
<b>Semester : 2</b>							
<b>Generic Core Courses</b>							
TH4589	0403470201	Advanced Immunology		3	90	60	150
TH4101	0403470202	Cell Biology		3	90	60	150
TH4277	0403470203	Metabolism		3	90	60	150
TH4273	0403470204	Proteins and Enzymes		3	90	60	150
TH4278	0403470205	Biophysical Techniques		2	60	40	100
TH4276	0403470206	Practicals in Enzymology		2	60	40	100
TH4790	0403470207	Physiology and Endocrinology		2	60	40	100
TH4108	0403470208	Practicals in Animal Tissue Culture		2	60	40	100
SMC001	0403470209	Vasudhaiva Kutumbakam *		0	0	0	Mandatory Non-Credit Course
TH4789		Health and Wellness Module II #		0	0	0	Mandatory Non-Credit Course
<b>Total</b>				<b>20</b>	<b>600</b>	<b>400</b>	<b>1000</b>
<b>Semester : 3</b>							
<b>Generic Core Courses</b>							
TH4282	0403470301	Drug Discovery and Pharmacology		3	90	60	150
TH4279	0403470302	Genetic and Metabolic Engineering		3	90	60	150

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TH4109	0403470303	Practicals in Bioanalytical Techniques		3	90	60	150
TH4281	0403470304	Practicals in Clinical Biochemistry		3	90	60	150
TH4280	0403470305	Clinical Biochemistry		2	60	40	100
T1656	0403470306	Intellectual Property Rights		2	60	40	100
TH4106	0403470307	Introduction to Laboratory Animal Science		2	60	40	100
TH4283	0403470308	Structural Biology		2	60	40	100
SMC003	0403470309	Health and Wellness *		0	0	0	Mandatory Non-Credit Course
<b>Total</b>				<b>20</b>	<b>600</b>	<b>400</b>	<b>1000</b>
<b>Semester : 4</b>							
<b>Generic Elective Course Group (Choose any one course)</b>							
T4820	0403470401	Project		20	600	400	1000
T4920	0403470402	Internship		20	600	400	1000
<b>Total Required Credits</b>				<b>20</b>	<b>600</b>	<b>400</b>	<b>1000</b>

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Semester	Continuous Assessment	Term End Examination	Total Credits	Total Marks
<b>Common</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
<b>Total</b>	<b>0</b>	<b>80</b>	<b>80</b>	<b>4000</b>