



Celebrating 50 Years of Excellence

Symbiosis School of Biological Sciences, Pune
Master of Science (Biochemistry)
Programme Structure 2022-24

1.	OBJECTIVE	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.	DURATION (IN MONTHS)	24 (Full Time)			
3.	INTAKE	30			
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	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.	SELECTION PROCEDURE	Written Test / Personal Interaction			
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	231000	20000	251000
		International Students (USD equivalent to INR)	345000	20000	365000
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 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 4.000 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 4.000 out of maximum of 10 CGPA for the program.					
13.	AWARD OF DEGREE/ DIPLOMA/ CERTIFICATE	Master of Science (Biochemistry) 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.	CLASSIFICATION OF CREDITS						
Semester	Generic Core	Generic Elective	Specialization Core	Specialization Elective	Open Elective	Audit	Total
1	20	0	0	0	0	0	20
2	18	2	0	0	0	1*	20
3	20	0	0	0	0	1*	20
4	20	0	0	0	0	0	20
Total	78	2	0	0	0	0	80
* Satisfactory completion of the non letter grade courses 'Integrated Disaster Management', '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 and Board of Management. 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	Specialization	Credit	Internal Marks	External Marks	Total Marks
Semester : 1							
Generic Core Courses							
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
TH4116	0403470106	Research Methodology and Biostatistics		3	90	60	150
TH4103	0403470107	Genetic analysis		2	60	40	100
Total				20	600	400	1000
Semester : 2							
Generic Core Courses							
TH4097	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
TH4105	0403470206	Genomics, Proteomics and Bioinformatics		2	60	40	100
TH4276	0403470207	Practicals in Enzymology		2	60	40	100
T4005	0403470208	Integrated Disaster Management *		0	0	0	Non Letter Grade
Total				18	540	360	900
Generic Elective Courses Group							
TH4108	0403470209	Practicals in Animal Tissue Culture		2	60	40	100
TH4111	0403470210	Practicals in Bioinformatics		2	60	40	100
Total Required Credits				2	60	40	100
Semester : 3							
Generic Core Courses							
TH4282	0403470301	Drug Discovery and Pharmacology		3	90	60	150
TH4279	0403470302	Genetic and Metabolic Engineering		3	90	60	150
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



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Catalog Course Code	Course Code	Course Title	Specialization	Credit	Internal Marks	External Marks	Total Marks
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
T0100	0403470309	Research Publication *		0	0	0	Non Letter Grade
Total				20	600	400	1000
Semester : 4							
Generic Core Courses							
T4820	0403470401	Project		20	600	400	1000
Total				20	600	400	1000



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Semester	Internal Credits	External Credits	Total Credits	Total Marks
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