

Symbiosis Statistical Institute, Pune
Bachelor of Science (Applied Statistics and Data Science)
Programme Structure 2022-2025

1.	OBJECTIVE	-To provide scientific skills and intensive training in Statistics and Data Science to develop data analytics insight with hands-on training -To impart identified set of skills and values at each stage of learning at graduation and post- graduation level through integrated course -To empower candidates to apply relevant statistics and Data Science techniques to solve business and domain specific complex problems -To help developing holistic individuals and responsible citizens.				
2.	DURATION (IN MONTHS)	48 (Full Time)				
3.	INTAKE	60				
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	Std. XII (10 + 2) pass or equivalent examination from any recognized Board with a minimum of 50% marks or equivalent grade (45% Marks or equivalent grade for Scheduled Caste / Scheduled Tribes), with Mathematics as one of the subjects. Students who wish to opt for Honours with Research must earn a 7.5 CGPA and above at the end of Semester-6.				
6.	SELECTION PROCEDURE	1. Symbiosis Entrance Test (SET) 2. Personal Interaction (PI) for shortlisted candidates based on SET				
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	
		Indian Students	236500	20000	256500	
		International Students (USD equivalent to INR)	355000	20000	375000	
	International Students	NRI/ PIO/ OCI Category (Amount in US\$)	355000	20000	375000	

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11.	ASSESSMENT	The courses will have 40% Continuous Assessment and 60% 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 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 10 CGPA for the programme.						
13.	AWARD OF DEGREE/ DIPLOMA/ CERTIFICATE	<p>Bachelor of Science (Applied Statistics and Data Science) will be awarded at the end of the semester-6 by taking into consideration the performance of all semester examinations subject to obtaining a minimum of 4.00 CGPA out of 10 CGPA.</p> <p>OR</p> <p>Bachelor of Science (Applied Statistics and Data Science) Honours will be awarded at the end of the semester-8 by taking into consideration the performance of all semester examinations subject to obtaining a minimum 4.00 CGPA out of 10 CGPA.</p> <p>OR</p> <p>Bachelor of Science (Applied Statistics and Data Science) Honours with Research will be awarded at the end of the semester- 8 by taking into consideration the performance of all semester examinations subject to obtaining a minimum 4.00 CGPA out of 10 CGPA.</p>						
14.	CLASSIFICATION OF CREDITS							
	Semester	Generic Core	Generic Elective	Specialisation Core	Specialisation Elective	Open Elective	Audit	Total
	1	17	2	0	0	0	1*	19
	2	23	0	0	0	0	1*	23
	3	21	0	0	0	0	1*	21
	4	21	0	0	0	0	0	21
	5	21	0	0	0	0	0	21
	6	16	5	0	0	0	0	21
	Total	119	7	0	0	0	0	126
	Honours							
	1	17	2	0	0	0	1*	19
	2	23	0	0	0	0	1*	23
	3	21	0	0	0	0	1*	21
	4	21	0	0	0	0	0	21
	5	21	0	0	0	0	0	21
	6	16	5	0	0	0	0	21

7	20	0	0	0	0	0	20
8	15	0	0	0	0	0	15
Total	154	7	0	0	0	0	161
Honours with Research							
1	17	2	0	0	0	1*	19
2	23	0	0	0	0	1*	23
3	21	0	0	0	0	1*	21
4	21	0	0	0	0	0	21
5	21	0	0	0	0	0	21
6	16	5	0	0	0	0	21
7	20	0	0	0	0	0	20
8	15	0	0	0	0	0	15
Total	154	7	0	0	0	0	161

* Satisfactory completion of the non letter grade course 'Integrated Disaster Management', 'Core Environmental Studies' and 'Fitness for Life' is mandatory for the award of degree.

The revised programme structure supersedes the previously approved programme structure dated 17/12/2024 for the programme.

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	Internal Marks	External Marks	Total Marks
Semester : 1							
Generic Core Courses							
T6981	0606210101	Probability Theory		4	40	60	100
T6984	0606210102	Statistical Data Analysis-I		4	40	60	100
T6978	0606210103	Mathematics for Data Science		4	40	60	100
T6973	0606210104	Discrete Mathematics		4	40	60	100
T6926	0606210105	Dictionary making across Indian languages		1	25	0	25
TH4095	0606210106	Fitness for Life *		0	0	0	Non - Letter Grade
Total				17	185	240	425
Generic Elective Courses Group							
T6925	0606210107	Cultural and Heritage Education		2	50	0	50
T4666	0606210108	Well for Life		2	50	0	50
T6095	0606210109	Culture and Communication		2	50	0	50
Total Required Credits				2	50	0	50
Semester : 2							
Generic Core Courses							
T6985	0606210201	Statistical Data Analysis-II		4	40	60	100
T6971	0606210202	Design and Analysis of Sample Survey Techniques		5	50	75	125
T6684	0606210203	Probability Distributions		4	40	60	100
T6983	0606210204	Statistical Data Analysis Using Microsoft Excel		4	40	60	100
T6977	0606210205	Lilavati		2	20	30	50
T6979	0606210206	Numerical Methods		4	40	60	100
T4005	0606210207	Integrated Disaster Management *		0	0	0	Non - Letter Grade
Total				23	230	345	575
Semester : 3							
Generic Core Courses							
T6975	0606210301	Hypothesis Testing		4	40	60	100
T6966	0606210302	Calculus for Data Science		3	30	45	75
T6970	0606210303	Database Management System		4	40	60	100
T6774	0606210304	Principles of Economics		2	20	30	50
T1314	0606210305	Corporate Governance and Finance		2	50	0	50

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Catalog Course Code	Course Code	Course Title	Specialisation	Credit	Internal Marks	External Marks	Total Marks
T4015	0606210306	Comparative Health Systems		1	25	0	25
F6009	0606210307	Art Integrated Cultural Education		1	25	0	25
T6804	0606210308	Project - I		4	100	0	100
T2883	0606210309	Core Environmental Studies *		0	0	0	Non - Letter Grade
Total				21	330	195	525
Semester : 4							
Generic Core Courses							
T6972	0606210401	Designs of Experiments and Analysis		4	40	60	100
T6967	0606210402	Data Science I		4	40	60	100
T6965	0606210403	Actuarial Statistics		2	20	30	50
T6007	0606210404	Business Communication		2	50	0	50
T6976	0606210405	Introduction to R		4	40	60	100
T6974	0606210406	Global Citizenship: World is one family		1	25	0	25
T8000	0606210407	Service Learning		4	0	100	100
Total				21	215	310	525
Semester : 5							
Generic Core Courses							
T6697	0606210501	Statistical Inference		4	40	60	100
T6968	0606210502	Data Science II		3	30	45	75
T6706	0606210503	Statistical Machine Learning		4	40	60	100
T6969	0606210504	Data Visualization		4	40	60	100
THM6030	0606210505	Statistics in Sports		2	50	0	50
T6988	0606210506	Text Mining		2	20	30	50
T3198	0606210507	Introduction to Python		2	50	0	50
Total				21	270	255	525
Semester : 6							
Generic Core Courses							
THM6031	0606210601	Bayesian Inference		4	40	60	100
THM6041	0606210602	Demography		4	40	60	100
THM6066	0606210604	Time Series		6	60	90	150
THM6026	0606210605	Data Acquisition Tools		2	50	0	50
Total				16	190	210	400

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Catalog Course Code	Course Code	Course Title	Specialisation	Credit	Internal Marks	External Marks	Total Marks
Generic Elective Courses Group							
Students who exit the programme after completion of three year should opt for the Project - II course)							
THM6029	0606210603	Questionnaire Development		2	50	0	50
T8732	0606210606	Design Thinking		3	30	45	75
T6805	0606210607	Project - II		5	50	75	125
Total Required Credits				5	50	75	125
Semester : 7							
Honours/ Honours with Research							
Generic Core Courses							
THM6027	0606210705	Technical or Report Writing		2	50	0	50
THM6032	0606210701	Stochastic Processes		6	60	90	150
THM6038	0606210702	Optimization Techniques		4	40	60	100
THM6124	0606210703	Statistical Quality Control		4	40	60	100
THM6035	0606210704	Reliability and Survival Analysis		4	40	60	100
Total				20	230	270	500
Semester : 8							
Honours							
Generic Core Courses							
THM6039	0606210801	Research Methodology		2	50	0	50
T6705	0606210804	Statistical Simulation		3	75	0	75
T7523	0606210802	Data Mining		4	40	60	100
T6906	0606210803	Internship		6	150	0	150
Total				15	315	60	375
Honours with Research							
Generic Core Courses							
T6812	0606210805	Research Project		12	300	0	300
T6705	0606210804	Statistical Simulation		3	75	0	75
Total				15	375	0	375

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Semester	Internal Credits	External Credits	Total Credits	Total Marks
Common				
Semester 1	3	16	19	475
Semester 2	0	23	23	575
Semester 3	8	13	21	575
Semester 4	3	18	21	525
Semester 5	4	17	21	525
Semester 6	4	17	21	525
Total	22	104	126	3200
Honours				
Semester 1	3	16	19	475
Semester 2	0	23	23	575
Semester 3	8	13	21	575
Semester 4	3	18	21	525
Semester 5	4	17	21	525
Semester 6	4	17	21	525
Semester 7	2	18	20	500
Semester 8	11	4	15	375
Total	35	126	161	4075
Honours with Research				
Semester 1	3	16	19	475
Semester 2	0	23	23	575
Semester 3	8	13	21	575
Semester 4	3	18	21	525
Semester 5	4	17	21	525
Semester 6	4	17	21	525
Semester 7	2	18	20	500
Semester 8	15	0	15	375
Total	39	122	161	4075