Symbiosis Statistical Institute, Pune
Bachelor of Science (Applied Statistics and Data Science)
Programme Structure 2022-25

<table>
<tr>
<td>1.</td>
<td>OBJECTIVE</td>
<td colspan="5">-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.</td>
</tr>
<tr>
<td>2.</td>
<td>DURATION (IN MONTHS)</td>
<td colspan="5">36 (Full Time)</td>
</tr>
<tr>
<td>3.</td>
<td>INTAKE</td>
<td colspan="5">60</td>
</tr>
<tr>
<td>4.</td>
<td>RESERVATION</td>
<td>I.Within the sanctioned intake</td>
<td>a) SC (In Percentage)</td>
<td>b) ST (In Percentage)</td>
<td colspan="2">c) Differently abled (In Percentage)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>15</td>
<td>7.5</td>
<td colspan="2">3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>II.Over and above the sanctioned intake</td>
<td>a) Kashmiri Migrants (In Seats)</td>
<td colspan="3">b) International Students (In Percentage)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td colspan="3">15</td>
</tr>
<tr>
<td>5.</td>
<td>ELIGIBILITY</td>
<td colspan="5">Std. XII (10 + 2) pass or equivalent examination from any recognised 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.</td>
</tr>
<tr>
<td>6.</td>
<td>SELECTION PROCEDURE</td>
<td colspan="5">-Selection of students is based on:
1. Academic record at 12th and 10th standard.
2. Performance in the Personal Interaction (PI).</td>
</tr>
<tr>
<td>7.</td>
<td>MEDIUM OF INSTRUCTION</td>
<td colspan="5">English</td>
</tr>
<tr>
<td>8.</td>
<td>PROGRAMME PATTERN</td>
<td colspan="5">Semester</td>
</tr>
<tr>
<td>9.</td>
<td>COURSE & SPECIALIZATION</td>
<td colspan="5">As per Annexure A</td>
</tr>
<tr>
<td>10.</td>
<td>FEE</td>
<td></td>
<td>Academic Fee p.a</td>
<td>Institute Deposit</td>
<td colspan="2">Total</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td colspan="2"></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Indian Students</td>
<td>236500</td>
<td>20000</td>
<td colspan="2">256500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>International Students (USD equivalent to INR)</td>
<td>355000</td>
<td>20000</td>
<td colspan="2">375000</td>
</tr>
<tr>
<td>11.</td>
<td>ASSESSMENT</td>
<td colspan="5">All internal courses will have 100% component as internal evaluation at the institute level. All external courses will have 40% internal component and 60% external component [University] examination.</td>
</tr>
<tr>
<td>12.</td>
<td>STANDARD OF PASSING</td>
<td colspan="5">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</td>
</tr>
</table>

		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**	Bachelor of Science (Applied Statistics and Data Science) will be awarded at the end of semester VI examination by taking into consideration the performance of all semester examinations after obtaining minimum 4 CGPA out of 10CGPA.
14.	**CLASSIFICATION OF CREDITS**	

Semester	Generic Core	Generic Elective	Specialization Core	Specialization 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	15	0	0	0	0	0	15
Total	**118**	**2**	**0**	**0**	**0**	**0**	**120**

* Satisfactory completion of the non letter grade courses 'Integrated Disaster Management', 'Fitness for Life', 'Core Environmental Studies' is mandatory for the 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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Symbiosis Statistical Institute, Pune
Bachelor of Science (Applied Statistics and Data Science)
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Annexure A

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

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Catalog Course Code	Course Code	Course Title	Specialization	Cre-dits	Internal Marks	External Mark	Internal Practical Marks	External Practica l Marks	Total Marks
T4015	0606210306	Comparative Health Systems		1	25	0	0	0	25
F0001	0606210307	Flexi-Credit Course		1	25	0	0	0	25
T6804	0606210308	Project - I		4	100	0	0	0	100
T2883	0606210309	Core Environmental Studies *		0	0	0	0	0	Non Letter Grade
			Total	**21**	**330**	**195**	**0**	**0**	**525**
			Semester : 4						
			Generic Core Courses						
T6972	0606210401	Designs of Experiments and Analysis		4	40	60	0	0	100
T6967	0606210402	Data Science I		4	40	60	0	0	100
T6965	0606210403	Actuarial Statistics		2	20	30	0	0	50
T6007	0606210404	Business Communication		2	50	0	0	0	50
T6976	0606210405	Introduction to R		4	40	60	0	0	100
T6974	0606210406	Global Citizenship: World is one family		1	25	0	0	0	25
T8000	0606210407	Service Learning		4	0	100	0	0	100
			Total	**21**	**215**	**310**	**0**	**0**	**525**
			Semester : 5						
			Generic Core Courses						
T6697	0606210501	Statistical Inference		4	40	60	0	0	100
T6968	0606210502	Data Science II		3	30	45	0	0	75
T6706	0606210503	Statistical Machine Learning		4	40	60	0	0	100
T6969	0606210504	Data Visualization		4	40	60	0	0	100
F0002	0606210505	Flexi-Credit Course		2	50	0	0	0	50
T6988	0606210506	Text Mining		2	20	30	0	0	50
T3198	0606210507	Introduction to Python		2	50	0	0	0	50
			Total	**21**	**270**	**255**	**0**	**0**	**525**
			Semester : 6						
			Generic Core Courses						
T6982	0606210601	Resampling		2	20	30	0	0	50
T6812	0606210602	Project - II		12	120	180	0	0	300
T6709	0606210603	Seminar		1	25	0	0	0	25
			Total	**15**	**165**	**210**	**0**	**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	525
Semester 4	3	18	21	525
Semester 5	4	17	21	525
Semester 6	1	14	15	375
Total	**19**	**101**	**120**	**3000**