Symbiosis Institute of Computer Studies and Research, Pune
Master of Science (System Security)
Programme Structure 2019-21

1.	**OBJECTIVE**	Government IT projects and Corporates are on alert to amplify and elevate their infrastructure and data security due to threats from hackers and cyber-terrorists. In this view, the customers have increased the requirements of security procedures dramatically. With the growing demand of data and cyber security, we are aiming to develop the workforce with skill set to satisfy the need of this rapidly expanding, dynamic field. The programme will cover various aspect of security such as Network Security, Information Security, Regulations and compliances.			
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 from any recognised University/ Institution of National Importance with a minimum of 50% marks or equivalent grade (45% marks or equivalent grade for Scheduled Caste / Scheduled Tribes).			
6.	**SELECTION PROCEDURE**	Symbiosis National Aptitude Test, Group Exercise, Personal Interaction and Writing Ability Test (GE-PIWAT)			
7.	**MEDIUM OF INSTRUCTION**	English			
8.	**PROGRAMME PATTERN**	Semester			
9.	**COURSE & SPECIALIZATION**	Attached as Annexure A			
10.	**FEE**		**Academic Fee p.a**	**Institute Deposit**	**Total**
		Indian Students	200000	20000	220000
		International Students (USD equivalent to INR)	300000	20000	320000
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 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**	Master of Science (System Security) will be awarded at the end of 4th semester examination by taking into consideration the performance of all 4 semester's examinations after obtaining minimum 4.00 CGPA out of 10.00 CGPA.

14. NATURE WISE DISTRIBUTION OF CREDITS

Semester	Generic Core	Generic Elective	Specialization Core	Specialization Elective	Open Elective	Audit	Total
1	21	0	0	0	0	0	21
2	17	7	0	0	0	1*	24
3	12	7	0	0	0	0	19
4	16	0	0	0	0	0	16
Total	**66**	**14**	**0**	**0**	**0**	**0**	**80**

* Satisfactory completion of the letter grade course 'Integrated Disaster Management' is mandatory for award of degree.

Programme Structure is approved by the Academic Council subject to its norms & conditions. Any provision in the Programme Structure which violates the basic rules & regulations is deemed to be termed "Null & Void".

Head-Academics

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Annexure A

Catalog Course Code	Course Code	Course Title	Specialization	Credit	Internal Credits	External Credits	Total Marks
Semester : 1
Generic Core Courses
T3022	030143101	Cryptography		3	90	60	150
T3017	030143102	Python Programming		3	90	60	150
T3555	030143103	Operating System Fundamentals		3	90	60	150
T3545	030143104	Fundamentals of Computer Networking		3	90	60	150
T3537	030143105	Scripting Language		3	90	60	150
T3411	030143106	Cyber law		2	60	40	100
T3410	030143107	Information Security Essentials		2	60	40	100
T3433	030143108	Introduction to Relational Database Management		2	60	40	100
			Total	21	630	420	1050
Semester : 2
Generic Core Courses
T3423	030143201	Linux Server Essentials		3	90	60	150
T3015	030143202	Network Programming		3	90	60	150
T3432	030143203	Secure Software Engineering		3	90	60	150
T3426	030143204	Windows Server Essentials		3	90	60	150
T3546	030143205	Cloud Architecture		3	90	60	150
T3701	030143206	Dissertation		2	100	0	100
T4005	030143207	Integrated Disaster Management *		0	0	0	Letter Grade
			Total	17	550	300	850
Generic Elective Courses Group
T3279	030143208	Database Administration - I		3	90	60	150
T3541	030143209	Content Delivery Network and Security		3	90	60	150
F0003	030143210	Flexi-Credit Course		3	150	0	150
			Total Required Credits	3	90	60	150
Generic Elective Courses Group
T3061	030143211	IT Infrastructure Library		2	60	40	100
T3429	030143212	Asset Management		2	60	40	100
T3420	030143213	Essesntials of Vulnerability Assessment and Penetration Testing		2	60	40	100
T3416	030143214	Computer Forensic - Detection & Prevention of Frauds		2	60	40	100
			Total Required Credits	4	120	80	200
Semester : 3
Generic Core Courses
T3540	030143301	Identity and Access Management		3	90	60	150
T3543	030143302	Virtualization and Security		3	90	60	150
T3031	030143303	BCM DR and Crisis Response Management		2	60	40	100
T3421	030143304	Infrastructure Security		2	60	40	100
T3802	030143305	Pilot Project		2	100	0	100
			Total	12	400	200	600
\multicolumn{8}{c}{Generic Elective Courses Group}

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Annexure A

Catalog Course Code	Course Code	Course Title	Specialization	Credit	Internal Credits	External Credits	Total Marks
T3414	030143306	Database Security & Performance Tuning		3	90	60	150
T3278	030143307	Applied Cryptography		3	90	60	150
F0003	030143308	Flexi-Credit Course		3	150	0	150
		Total Required Credits		**3**	**90**	**60**	**150**
		Generic Elective Courses Group					
T3417	030143309	Mobile and Digital Forensics		2	60	40	100
T3430	030143310	System Audit		2	60	40	100
T3415	030143311	IS Risk Analysis		2	60	40	100
T3418	030143312	Advanced Vulnerability Assessment and Penetration Testing		2	60	40	100
		Total Required Credits		**4**	**120**	**80**	**200**
		Semester : 4					
		Generic Core Courses					
T3916	030143401	Industry Internship		16	480	320	800
		Total		**16**	**480**	**320**	**800**

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Semester	Internal Credits	External Credits	Total Credits	Total Marks
Semester1	0	21	21	1050
Semester2	5	19	24	1200
Semester3	5	14	19	950
Semester4	0	16	16	800
Total	**10**	**70**	**80**	**4000**