Symbiosis Institute of Technology, Pune
Bachelor of Technology (Computer Science and Engineering)
Dual Degree in collaboration with Deakin University, Australia
Programme Structure 2025-2029

<table>
<tr><td>1.</td><td>OBJECTIVE</td><td colspan="4">The B.Tech Dual Degree is a four-year, full-time programme offered in collaboration with Deakin University in Australia. Students study the first two years at Symbiosis Institute of Technology, Pune, and the final two years at Deakin University, earning dual degrees. The programme builds strong foundations in computing and provides knowledge in cybersecurity. It prepares students to understand and address modern digital security challenges through a balanced approach of theory and practical learning. International exposure enhances adaptability, critical thinking, and a global perspective. The objective of the programme is that the graduates are well-equipped for global careers, with the ability to strengthen digital systems, support informed decision-making, and contribute effectively to organisations in a technology-driven environment.</td></tr>
<tr><td>2.</td><td>DURATION (IN MONTHS)</td><td colspan="4">48 (Full Time)</td></tr>
<tr><td>3.</td><td>INTAKE</td><td colspan="4">10</td></tr>
<tr><td rowspan="4">4.</td><td rowspan="4">RESERVATION</td><td rowspan="2">I.Within the sanctioned intake</td><td>a) SC
(In Percentage)</td><td>b) ST
(In Percentage)</td><td>c) Differently abled
(In Percentage)</td></tr>
<tr><td>15</td><td>7.5</td><td>3</td></tr>
<tr><td rowspan="2">II.Over and above the sanctioned intake</td><td colspan="2">a) Kashmiri Migrants
(In Seats)</td><td>b) International Students
(In Percentage)</td></tr>
<tr><td colspan="2">2</td><td>15</td></tr>
<tr><td>5.</td><td>ELIGIBILITY</td><td colspan="4">Passed 10+2 examination with Physics and Mathematics as compulsory subjects along with one of Chemistry/ Computer Science/ Electronics/ Information Technology/Biology/Informatics Practices/ Biotechnology/Technical Vocational subject/ Agriculture/Engineering Graphics/Business Studies /Entrepreneurship
Overall score of at least 65% in 12th grade (Physics and Maths compulsory), plus a qualifying score in symbiosis entrance exam / equivalent entrance examination.
In addition to the above, for progression to the Dual Degree program at Deakin University, Australia, the following terms for eligibility apply:</td></tr>
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		For progression to Dual Degree- Those students who complete the first two years (4 semesters) at SIT with a minimum "B" grade (55 % or CGPA of 5.5), will be eligible to go for Bachelor of Cyber Security (Honours). Official transcript from SIT reporting all courses with grades for Year -1 and 2 in SIT. No disciplinary other cases shall be impending on the student and no active backlogs. IELTS:6.0 overall (with no band score less than 6.0).			
6.	**SELECTION PROCEDURE**	For Symbiosis Institute of Technology Merit list by valid score of Symbiosis Entrance Test (SET) or Joint Entrance Examination (JEE - Main) or Any State Government Engineering Entrance Examination For Dual Degree program at the Deakin University, Australia Selection for progression to a Dual Degree will be based on fulfillment of the Eligibility Criteria listed above and submission of an official transcript from SIT reporting all courses with grades for their Year 1 and Year 2 in SIT			
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**

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	Indian Students (Amount in INR)		422000	20000	442000
	International Students	**NRI/ PIO/ OCI Category (Amount in US$)**	5370	275	5645
		Foreign National Category (Amount in US$)	1300	275	1575
Students will pay only First and Second year fees at SIT, SIU and Third and Fourth year fees at Deakin University. Australia.					
11.	**ASSESSMENT**	At Symbiosis Institute of Technology The theory courses will have 40% Continuous Assessment and 60% Term End [University] examination, and Lab courses (Practical) 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. For the Bachelor of Cyber Security (Honours) programme, Deakin University, Australia, the assessment standards will be as per Deakin University, Australia.			
12.	**STANDARD OF PASSING**	At Symbiosis Institute of Technology 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 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 a maximum of 10 CGPA for the programme. For the Bachelor of Cyber Security (Honours) programme, Deakin University, Australia, the standard of passing will be as per Deakin University norms.			

13.	**AWARD OF DEGREE**	The first two years of the programme shall be completed at Symbiosis International (Deemed University) [SIU], and the third and fourth year at Deakin University, Australia and the respective University's passing criteria shall be applicable. Bachelor of Technology (Computer Science and Engineering) degree will be awarded upon successful completion of the programme requirements and obtaining a minimum of 4 out of a maximum of 10 CGPA. Bachelor of Cyber Security (Honours) degree will be awarded by Deakin University, Australia, upon successful completion of the programme requirements and satisfactory performance as per Deakin University regulations.

14. CLASSIFICATION OF CREDITS

Semester	Basic Sciences	Engineering Sciences	Professional Core	Professional Elective	Humanities and Social Sciences including Management	Multidisciplinary Open Electives	Project/ Internship/ Seminar	Indian Knowledge System	Total Credits	No. of Mandatory Non-Credit Course/s	No. of Non-Credit Audit Course/s
1	8	7	1	0	2	0	0	2	20	0	As per the student's choice
2	3	7	9	0	1	0	0	0	20	1 *	
3	3	0	17	0	0	0	0	0	20	1 *	
4	3	1	11	0	0	3	2	0	20	2 *	
5	Courses delivered as per the syllabus and structure of the Bachelor of Cyber Security (Honours) at Deakin University, Australia.										
6	Courses delivered as per the syllabus and structure of the Bachelor of Cyber Security (Honours) at Deakin University, Australia.										
7	Courses delivered as per the syllabus and structure of the Bachelor of Cyber Security (Honours) at Deakin University, Australia.										
8	Courses delivered as per the syllabus and structure of the Bachelor of Cyber Security (Honours) at Deakin University, Australia.										
Total	**17**	**15**	**38**	**0**	**3**	**3**	**2**	**2**	**80**	**0**	

* Satisfactory completion of non credit courses '*Vasudhaiva Kutumbakam*' 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 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	Nature	Specialisation/ Area/ Department	Teaching Scheme (Hours Per Week)			Examination Scheme (Marks)				Total Credits	Total
								Practical		Theory			
					L	T	Lab	CA	ESE	CA	ESE		
Semester : 1													
Generic Core Courses													
TEE7237	0701320101	Calculus	BS		3	1	0	0	0	40	60	4	100
TEE7244	0701320102	Fundamentals of Quantum Physics	BS		3	0	2	15	10	30	45	4	100
TEE7301	0701320103	Programming Paradigm and Problem Solving	ES		2	0	2	15	10	20	30	3	75
TEE7303	0701320104	Software and Generative AI Tools	ES		0	0	2	15	10	0	0	1	25
TEE7310	0701320105	Digital Electronics and Logic Design	ES		2	0	2	15	10	20	30	3	75
TEE7296	0701320106	Object Oriented Programming	PC		0	0	2	15	10	0	0	1	25
THM6150	0701320107	Technical and Professional Communication Skills	HSMC		0	0	2	25	0	0	0	1	25
T6732	0701320108	Critical Thinking	HSMC		1	0	0	0	0	25	0	1	25
THM6144	0701320109	Indian Knowledge Systems	IKS		2	0	0	0	0	50	0	2	50
				Total	**13**	**1**	**12**	**100**	**50**	**185**	**165**	**20**	**500**
Semester : 2													
Generic Core Courses													
TEE7255	0701320201	Linear Algebra	BS		2	1	0	0	0	30	45	3	75

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								Practical		Theory			
					L	T	Lab	CA	ESE	CA	ESE		
TEE7317	0701320202	Microcontrollers and Sensors	ES		2	0	2	15	10	20	30	3	75
TEE7306	0701320203	Cyber Security	ES		1	0	2	25	0	25	0	2	50
TM2278	0701320204	Introduction to Environment and Sustainability	ES		0	0	2	25	0	0	0	1	25
TEE7364	0701320205	Tinker and IDEA Lab	ES		0	0	2	25	0	0	0	1	25
TEE7302	0701320206	Python Programming	PC		2	0	2	15	10	20	30	3	75
TEE7290	0701320207	Computer Architecture and Organization	PC		2	0	2	15	10	20	30	3	75
TEE7304	0701320208	Software Engineering	PC		2	0	2	15	10	20	30	3	75
T6873	0701320209	Creative Thinking	HSMC		1	0	0	0	0	25	0	1	25
TEE7265	0701320210	Career Essentials - I *	MC		0	0	0	0	0	0	0	Mandatory Non-Credit Course	0
				Total	**12**	**1**	**14**	**135**	**40**	**160**	**165**	**20**	**500**
Semester : 3													
Generic Core Courses													
TEE7254	0701320301	Discrete Mathematics	BS		2	1	0	0	0	30	45	3	75

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								Practical		Theory			
					L	T	Lab	CA	ESE	CA	ESE		
TEE7448	0701320302	Data Structures	PC		2	0	4	30	20	20	30	4	100
TEE7455	0701320303	Operating Systems	PC		3	0	2	15	10	30	45	4	100
TEE7449	0701320304	Database Management Systems	PC		2	0	4	30	20	20	30	4	100
F0002	0701320305	Flexi-Credit Course	PC		0	0	4	50	0	0	0	2	50
TEE7456	0701320306	Programming with JAVA	PC		0	0	4	30	20	0	0	2	50
TEE7457	0701320307	Web Application Development	PC		0	0	2	15	10	0	0	1	25
TEE7419	0701320308	Career Essentials - II *	MC		0	0	0	0	0	0	0	Mandatory Non-Credit Course	0
				Total	**9**	**1**	**20**	**170**	**80**	**100**	**150**	**20**	**500**
Semester : 4													
Generic Core Courses													
TE7689	0701320401	Statistics and Probability	BS		2	1	0	0	0	30	45	3	75
TEE7478	0701320402	Design Thinking	ES		1	0	0	0	0	25	0	1	25
TEE7442	0701320403	Computer Networks	PC		3	0	2	15	10	30	45	4	100

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								Practical		Theory			
					L	T	Lab	CA	ESE	CA	ESE		
TEE7450	0701320404	Design and Analysis of Algorithms	PC		2	0	2	15	10	20	30	3	75
TEE7446	0701320405	Data Management and Visualization	PC		2	0	2	15	10	20	30	3	75
TEE7441	0701320406	Advanced Python Lab	PC		0	0	2	15	10	0	0	1	25
TE7290	0701320407	Project Based Learning -I	PIS		0	0	4	50	0	0	0	2	50
TEE7420	0701320408	Career Essentials - III *	MC		0	0	0	0	0	0	0	Mandatory Non-Credit Course	0
SMC001	0701320421	*Vasudhaiva Kutumbakam* *	MC		0	0	0	0	0	0	0	Mandatory Non-Credit Course	0
				Total	**10**	**1**	**12**	**110**	**40**	**125**	**150**	**17**	**425**
Multidisciplinary Open Elective Courses (Choose Any One Course)													
TEE7416	0701320409	Quantum Computing for Engineers	MOPE	Applied Science	2	1	0	0	0	30	45	3	75
TEE7414	0701320410	Mathematics for Data Science	MOPE	Applied Science	2	1	0	0	0	30	45	3	75

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								Practical		Theory			
					L	T	Lab	CA	ESE	CA	ESE		
TEE7438	0701320411	Smart Cities Planning and Management	MOPE	Civil Engineering	2	1	0	0	0	30	45	3	75
TEE7435	0701320412	Intelligent Waste Management Techniques	MOPE	Civil Engineering	2	1	0	0	0	30	45	3	75
TEE7018	0701320413	Engineering Simulation and Modeling Tools	MOPE	Electronics and Telecommunication Engineering	2	1	0	0	0	30	45	3	75
TEE7472	0701320414	Medical Electronics	MOPE	Electronics and Telecommunication Engineering	2	1	0	0	0	30	45	3	75
TE7351	0701320415	3D Printing and Prototyping	MOPE	Mechanical Engineering	2	1	0	0	0	30	45	3	75
TEE7476	0701320416	Battery Management Systems	MOPE	Mechanical Engineering	2	1	0	0	0	30	45	3	75
TEE7425	0701320417	Fundamentals of Machine Learning	MOPE	Artificial Intelligence and Machine Learning	2	1	0	0	0	30	45	3	75
TEE7418	0701320418	AI System Development	MOPE	Artificial Intelligence and Machine Learning	2	1	0	0	0	30	45	3	75
TEE7489	0701320419	Fundamentals of Robotics and Automation	MOPE	Robotics and Automation	2	1	0	0	0	30	45	3	75
TEE7499	0701320420	Robotic Process Automation	MOPE	Robotics and Automation	2	1	0	0	0	30	45	3	75
Total Required Credits								**0**	**0**	**30**	**45**	**3**	**75**

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Catalog Course Code	Course Code	Course Title	Nature	Specialisation/ Area/ Department	Teaching Scheme (Hours Per Week)			Examination Scheme (Marks)				Total Credits	Total
								Practical		Theory			
					L	T	Lab	CA	ESE	CA	ESE		
5th to 8th Semesters Courses delivered as per the syllabus and structure of the Bachelor of Cyber Security (Honours) program offered by Deakin University, Australia. Students will take courses to fulfil the credit requirements of our programme.													

Abbreviations (Nature)	Description
BS	Basic Sciences
ES	Engineering Sciences
PC	Professional Core
PE	Professional Elective
HSMC	Humanities and Social Sciences including Management
MOPE	Multidisciplinary Open Electives
PIS	Project, Internship, Seminar
IKS	Indian Knowledge System
L	Lecture
MC	Mandatory Course
T	Tutorial
CA	Continuous Assessment
ESE	End Semester Examination
LAB	Laboratory

Track 1 (T1): For Regular Students
Track 2 (T2): For Students opting for Internship/ Entrepreneurship

Definition:
Honours: Students have the option to pursue an "Honours" degree by completing an additional 20 credits within their major discipline, focusing on more advanced, specialised, emerging, or multidisciplinary courses beyond the standard requirements of the B.Tech degree.

Minors: Students have the option to pursue a "Minor" by completing 18 credits in a discipline/ specialisation other than their major discipline beyond the standard requirements of the B.Tech. Degree.

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Semester	Continuous Assessment	End Semester Examination	Total Credits	Total Marks
Common				
Semester 1	4	16	20	500
Semester 2	5	15	20	500
Semester 3	2	18	20	500
Semester 4	3	17	20	500
Semester 5	Courses delivered as per the syllabus and structure of the Bachelor of Cyber Security (Honours) at Deakin University, Australia.			
Semester 6	Courses delivered as per the syllabus and structure of the Bachelor of Cyber Security (Honours) at Deakin University, Australia.			
Semester 7	Courses delivered as per the syllabus and structure of the Bachelor of Cyber Security (Honours) at Deakin University, Australia.			
Semester 8	Courses delivered as per the syllabus and structure of the Bachelor of Cyber Security (Honours) at Deakin University, Australia.			
Total	**14**	**66**	**80**	**2000**

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Annexure D
Course Mapping Sheet

Bachelor of Cyber Security (Honours), Deakin University, Australia.					
Sr. No.	**Course Mapping Semester**	**Course Title**	**Course Credits**	**Deakin University, Australia**	
				University Course Title	**Credits**
1	5	Optimization for ML Systems	3	SIT281 Cryptography (Minor Unit)	1
2	5	Theory of Computation	3	ST 326 Advanced Network Analysis and Forensics (Minor Unit)	1
3	5	Cryptography and Information Security	3	SIT281 Cryptography (Minor Unit)	1
4	5	Data Science and Business Intelligence	3	SIT723 Research Techniques and Applications	2
5	5	Cloud Computing	3	SIT282 Computer Forensics and Investigations	1
6	5	Advances in Machine Learning	4	SIT384 Cyber Security Analytics	1
7	5	Entrepreneurship Venture	1	SIT723 Research Techniques and Applications	2
8	5	Service Learning	2	ST 326 Advanced Network Analysis and Forensics (Minor Unit)	1
9	6	Flexi-Credit Course	3	SIT379 Ethical Hacking	1
10	6	Organizational Behaviour	1	SIT281 Cryptography (Minor Unit)	1
11	6	Data Engineering and Applications	3	SIT384 Cyber Security Analytics	1
12	6	Compiler Design	3	SIT724 Research Project OR SIT746 Research Project Advanced	2
13	6	Distributed System	3	SIT223 Professional Practice in Information Technology	1
14	6	Blockchain Technology	3	SIT325 Advanced Network Security (Minor Unit)	1
15	6	Malware Analysis and Secure Coding	4	SIT324 Malware Analysis	1

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Annexure D
Course Mapping Sheet

16	6	Project Based Learning-II	2		
17	7	Flexi-Credit Course	3	SIT724 Research Project OR SIT746 Research Project Advanced	2
18	7	Technical Writing and Seminars	3	SIT282 Computer Forensics and Investigations	1
19	7	Project	4	SIT374 Team Project (A) - Project Management and Practices	1
20	7	Industry Internship	12	SIT327 Network Forensics	1
21	8	Seminar	2	SIT344 Professional Practice OR SIT378 Team Project (B) - Execution and Delivery AND SIT306 IT Placements and Industry Experience	2
22	8	Internship	12		
Total Credits			80		16

***Course mapping is subject to change.**