

**Symbiosis Institute of Computer Studies and Research, Pune**  
**Bachelor of Computer Applications**  
**Programme Structure 2021-24**

1.	<b>OBJECTIVE</b>	BCA offers the prequalification for professionals heading for smart career in the IT field, which measures up to international standards. On completing this course one can do higher studies such as MCA, MBA etc., in any UGC recognized universities or in any other reputed institution in India or abroad.				
2.	<b>DURATION MONTHS</b>	(IN	36 (Full Time)			
3.	<b>INTAKE</b>	120				
4.	<b>RESERVATION</b>	<b>I. Within the sanctioned intake</b>	a) SC (In Percentage)	b) ST (In Percentage)	c) Differently abled (In Percentage)	d) Defence (In Percentage)
			15	7.5	3	5
		<b>II. Over and above the sanctioned intake</b>	a) Kashmiri Migrants (In Seats)	b) International Students (In Percentage)		
			2	20		
5.	<b>ELIGIBILITY</b>	Passed Standard XII (10+2) or equivalent government approved Diploma in Engineering/ Technology from any recognised Board with a minimum of 50% marks or equivalent grade (45% marks or equivalent grade for Scheduled Caste/ Scheduled Tribes).				
6.	<b>SELECTION PROCEDURE</b>	Symbiosis Entrance Test, Personal Interaction and Writing Ability Test (PI-WAT)				
7.	<b>MEDIUM OF INSTRUCTION</b>	OF	English			
8.	<b>PROGRAMME PATTERN</b>	Semester				
9.	<b>COURSE SPECIALIZATION</b>	&	As per Annexure A			
10.	<b>FEE</b>		<b>Academic Fee p.a</b>	<b>Institute Deposit</b>	<b>Total</b>	
		<b>Indian Students</b>	165000	10000	175000	
		<b>International Students (USD equivalent to INR)</b>	250000	10000	260000	
11.	<b>ASSESSMENT</b>	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.				
12.	<b>STANDARD OF PASSING</b>	OF	The assessment of students 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.	<b>AWARD OF DEGREE/ DIPLOMA/ CERTIFICATE</b>	Bachelor of Computer Applications will be awarded at the end of semester VI examination by taking into consideration the performance of all semester examinations after obtaining minimum 4.00 CGPA out of 10 CGPA.

**14. NATURE WISE DISTRIBUTION OF CREDITS**

Semester	Generic Core	Generic Elective	Specialization Core	Specialization Elective	Open Elective	Audit	Total
1	18	0	0	0	0	1*	18
2	20	0	0	0	0	1*	20
3	14	8	0	0	0	1*	22
4	18	10	0	0	0	0	28
5	8	8	0	0	0	0	16
6	0	16	0	0	0	0	16
<b>Total</b>	<b>78</b>	<b>42</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>120</b>

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

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**Annexure A**

Catalog Course Code	Course Code	Course Title	Specialization	Credit	Internal Marks	External Marks	Total Marks
<b>Semester : 1</b>							
<b>Generic Core Courses</b>							
T3586	0301210101	Web Technologies		4	100	0	100
T3593	0301210102	Computational Thinking		4	40	60	100
T2495	0301210103	Business Communication		2	50	0	50
T3322	0301210104	Elements of Mathematics		2	20	30	50
T3244	0301210105	Introduction to Database Management System		2	20	30	50
T3213	0301210106	Introduction to Operating System		2	20	30	50
T3198	0301210107	Introduction to Python		2	20	30	50
T4005	0301210108	Integrated Disaster Management *		0	0	0	Non Letter Grade
<b>Total</b>				<b>18</b>	<b>270</b>	<b>180</b>	<b>450</b>
<b>Semester : 2</b>							
<b>Generic Core Courses</b>							
T3610	0301210201	Applications of Spreadsheets in Business		4	100	0	100
T3206	0301210202	Advanced Programming in Python		2	20	30	50
T3209	0301210203	Data Structures		2	20	30	50
T3200	0301210204	Linux Shell Scripting		2	20	30	50
T3224	0301210205	Network Essentials		2	20	30	50
T3205	0301210206	Web Development using CMS		2	50	0	50
F0002	0301210207	Flexi-Credit Course		2	50	0	50
T3605	0301210208	Elements of System and Software Development		2	20	30	50
T3609	0301210209	Structured Query Language		2	20	30	50
T2883	0301210210	Core Environmental Studies *		0	0	0	Non Letter Grade
<b>Total</b>				<b>20</b>	<b>320</b>	<b>180</b>	<b>500</b>
<b>Semester : 3</b>							
<b>Generic Core Courses</b>							
T3202	0301210301	Object Oriented Programming		4	40	60	100
T3595	0301210302	Design and Implementation of Algorithms		4	40	60	100
T3474	0301210303	Web Development using Python		2	20	30	50
TH4095	0301210312	Fitness for Life *		0	0	0	Non Letter Grade
T3606	030121	Software Engineering Practices		4	40	60	100
<b>Total</b>				<b>14</b>	<b>140</b>	<b>210</b>	<b>350</b>
<b>Generic Elective Courses Group</b>							
T3221	0301210307	Introduction to Cloud Computing		4	40	60	100
T3237	0301210309	Foundations of Data Warehousing and Data Mining		4	40	60	100
T3663	030121	Introduction to Mobile Concepts		4	40	60	100
<b>Total Required Credits</b>				<b>8</b>	<b>80</b>	<b>120</b>	<b>200</b>
<b>Semester : 4</b>							
<b>Generic Core Courses</b>							
T8000	0301210401	Service Learning		4	100	0	100
T3258	0301210402	Current Trends and Practices in IT		3	75	0	75
T3803	0301210403	Project		3	75	0	75
T3371	0301210404	Introduction to Java Enterprise Framework		2	20	30	50
F0002	0301210405	Flexi-Credit Course		2	50	0	50
T3607	030121	Software Project Practices		4	40	60	100
<b>Total</b>				<b>18</b>	<b>360</b>	<b>90</b>	<b>450</b>
<b>Generic Elective Courses Group</b>							
T3599	0301210411	Cloud Application Development		4	40	60	100
TE7019	030121	Big Data Analytics		4	40	60	100
T3201	030121	Mobile Programming		4	40	60	100
<b>Total Required Credits</b>				<b>8</b>	<b>80</b>	<b>120</b>	<b>200</b>
<b>Generic Elective Courses Group</b>							
T6096	0301210414	Creative Writing		2	50	0	50
T6181	0301210415	Understanding Cinema		2	50	0	50
T6182	0301210416	Appreciating Cinema		2	50	0	50
T6246	0301210417	Music in Media I		2	50	0	50

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**Annexure A**

Catalog Course Code	Course Code	Course Title	Specialization	Credit	Internal Marks	External Marks	Total Marks
T6255	0301210418	Introduction to Theatre		2	50	0	50
T6274	0301210419	Foundations of Ethics		2	50	0	50
T6334	0301210420	Basic Sociology		2	50	0	50
T6307	0301210421	Basic Psychology		2	50	0	50
<b>Total Required Credits</b>				<b>2</b>	<b>50</b>	<b>0</b>	<b>50</b>
<b>Semester : 5</b>							
<b>Generic Core Courses</b>							
T1234	0301210501	Information Technology and Regulatory Compliance		2	20	30	50
F0002	0301210502	Flexi-Credit Course		2	50	0	50
T3608	030121	Software Testing		4	40	60	100
<b>Total</b>				<b>8</b>	<b>110</b>	<b>90</b>	<b>200</b>
<b>Generic Elective Courses Group</b>							
T3612	0301210507	Data Visualization		4	40	60	100
T3600	0301210508	Cloud Architectures and Security		4	40	60	100
T3588	030121	Game Design		4	40	60	100
<b>Total Required Credits</b>				<b>8</b>	<b>80</b>	<b>120</b>	<b>200</b>
<b>Semester : 6</b>							
<b>Choose any One Group</b>							
<b>Generic Elective Courses</b>							
T3912	0301210601	Industry Internship		12	120	180	300
F0004	0301210602	Flexi-Credit Course		4	100	0	100
<b>Generic Elective Courses</b>							
F0004	0301210602	Flexi-Credit Course		4	100	0	100
T3808	0301210603	Project		8	80	120	200
T3009	0301210604	Best Programming Practices		2	20	30	50
T3387	0301210605	Introduction to Design Patterns		2	20	30	50
T3812	030121	Project		12	120	180	300
<b>Total Required Credits</b>				<b>16</b>	<b>220</b>	<b>180</b>	<b>400</b>

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<b>Semester</b>	<b>Internal Credits</b>	<b>External Credits</b>	<b>Total Credits</b>	<b>Total Marks</b>
Semester 1	6	12	18	450
Semester 2	8	12	20	500
Semester 3	0	22	22	550
Semester 4	14	14	28	700
Semester 5	2	14	16	400
Semester 6	4	12	16	400
<b>Total</b>	<b>34</b>	<b>86</b>	<b>120</b>	<b>3000</b>