Chhatrapati Shahu Institute of Business Education and Research Kolhapur

An Autonomous Institute under UGC, Government of India

College with Potential for Excellence (CPE) Phase III

Reaccredited by NAAC with 'A+' Grade, RUSA 2.0

School of Computer Science and Applications

Bachelor of Computer Application (BCA)

Programme Structure and Syllabus

To be implemented from the academic year 2026-27

Aligned with NEP 2020

Programme Structure

BCA I - Level 4.5 - Semester I

Course Code	Course Name	Credits	Contact Hours	Internal Marks	Practical Marks	EOS Marks	Total Marks
CC101	Computer Concepts & Office Automation	4	60	--	40	60	100
CC102	Programming Using 'C'	4	60	--	40	60	100
SEC101	Compute Architecture & Operating System	4	60	40		60	100
AEC101	Business Communication	2	30	20	---	30	50
MDE101	a) Environmental Science and Sustainability b) Basics of Management c) Counselling	2	30	20	---	30	50
VAC101	Indian Knowledge System	2	30	20	---	30	50
AEC102	Foreign Language	2	30	20	---	30	50
Total Credits		**20**	**300**	**120**	**80**	**300**	**500**

BCA I - Level 4.5 - Semester II

Course Code	Course Name	Credits	Contact Hours	Internal Marks	Practical Marks	EOS Marks	Total Marks
CC103	Web Technology	4	60	--	40	60	100
CC104	Object Oriented Programing using C++	4	60	--	40	60	100
CC105	Software Engineering	4	60	40	--	60	100
SEC102	Mathematical Foundation	2	30	20	---	30	50
SEC103	Algorithm	2	30	20	---	30	50
VAC102	Democracy & Governance	2	30	20	---	30	50
SEC104	Technical Writing	2	30	20	---	30	50
Total Credits		**20**	**300**	**120**	**80**	**300**	**500**

Exit option: Level-4.5: Award of UG Certificate with 40 credits and an additional 4 credits skill based course on SWAYAM/ Internship

BCA II - Level 5.0 - Semester III

Course Code	Course Name	Credits	Contact Hours	Internal Marks	Practical Marks	EOS Marks	Total Marks
CC201	Advanced Web Technology	4	60	--	40	60	100
CC202	Java Programming	4	60	--	40	60	100
CC203	Database Management System	4	60	40	--	60	100
SEC201	Object-Oriented Design & UML	4	60	40	--	60	100
DSE201	1) Advanced Excel 2) E-commerce	2	30	20	---	30	50
VAC201	MOOC-I: Based on Soft Skills	2	30	20	---	30	50
Total Credits		**20**	**300**	**120**	**80**	**300**	**500**

BCA II - Level 5.0 - Semester IV

Course Code	Course Name	Credits	Contact Hours	Internal Marks	Practical Marks	EOS Marks	Total Marks
CC204	Python Programming	4	60	--	40	60	100
CC205	Data Structure	4	60	--	40	60	100
CC206	Computer Network	4	60	40	--	60	100
CC207	Mini Project	4	60	40	--	60	100
DSE202	1) Data Visualization 2) Power BI	2	30	20	---	30	50
SEC202	Business Communication	2	30	20	---	30	50
Total Credits		**20**	**300**	**120**	**80**	**300**	**500**

Exit option: Level-5.0: Award of UG Diploma with 80 credits and an additional 4 credits skill based course on SWAYAM / Internship

BCA III - Level 5.5 - Semester V

Course Code	Course Name	Credits	Hours	Int. Marks	Pract Marks	Ext. Marks	Total Marks
CC301	Mobile Application Development	4	60	40	--	60	100
CC302	Dot Net Technology	4	60	--	40	60	100
DSE301	1) Data Science 2) Machine Learning	4	60	--	40	60	100
SEC301	Cloud Computing	2	30	20	---	30	50
SEC302	Information Security	2	30	20	---	30	50
SEC303	Mini Project and Seminar	4	120	40	--	60	100
Total Credits		**20**	**300**	**120**	**80**	**300**	**500**

BCA III - Level 5.5 - Semester VI

Course Code	Course Name	Credits	Hours	Int. Marks	Pract Marks	Ext. Marks	Total Marks
CC303	Full Stack Web Development	4	60	--	40	60	100
CC304	Linux Administration	4	60	--	40	60	100
DSC302	a) Artificial Intelligence b) Big Data Analytics	4	60	40	--	60	100
SEC304	Major Project	4	120	40	--	60	100
SEC305	Major Project Presentation & Viva-voce	4	120	40	--	60	100
Total Credits		**20**	**300**	**120**	**80**	**300**	**500**

*** The students shall have an option to exit after 3rd year of Computer Application Program and will be awarded with a Bachelor's in Computer Application**

Exit option: Level-5.5: Award of UG Degree with 120 credits

BCA IV - Level 6.0 Honours Degree - Semester VII

Course Code	Course Name	Credits	Hours	Int. Marks	Pract Marks	Ext. Marks	Total Marks
CC401	Block Chain Technology	4	60	--	40	60	100
CC402	DevOps	4	60	--	40	60	100
CC403	Research Methodology	4	60	40	--	60	100
SEC401	Generative AI	4	60	40	--	60	100
SEC402	Cyber Security	4	60	40	--	60	100
Total Credits		**20**	**300**	**120**	**80**	**300**	**500**

BCA IV - Level 6.0 Honours Degree - Semester VIII

Code	Course Title	Credits	Contact Hours	Internal	EOS Marks	Marks
CC404	**Industry Project**	16	16 weeks			400
	Project Documentation				100	
	Presentation				100	
	Evaluation by Industry				100	
	Viva-Voce				100	
VAC	MOOC II	4	-	40	60	100
		20				**500**

Award of Four years UG Honours Degree with 160 credits

BCA IV - Level 6.0 Honours with Research Degree - Semester VII

Course Code	Course Name	Credits	Hours	Int. Marks	Pract Marks	Ext. Marks	Total Marks
CC401	Block Chain Technology	4	60	--	40	60	100
CC402	Quantum Computing	4	60	--	40	60	100
CC403	Research Methodology	4	60	40	--	60	100
SEC401	Generative AI	4	60	40	--	60	100
SEC402	Cyber Security	4	60	40	--	60	100
Total Credits		**20**	**300**	**120**	**80**	**300**	**500**

BCA IV - Level 6.0 Honours with Research Degree - Semester VIII

Code	Course Title	Credits	Contact Hours	Internal	EOS Marks	Marks
CC404	**Research Project**	16	16 weeks			400
	Project Documentation				100	
	Presentation				100	
	Evaluation by Industry				100	
	Viva-Voce				100	
VAC	MOOC I	4	-	40	60	100
		20				**500**

Award of Four years UG Honours with Research Degree with 160 credits