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

B.Sc. Computer Science

Programme Structure and Syllabus

To be implemented from the academic year 2026-27

Aligned with NEP 2020

Programme Structure

BSc CS I - Level 4.5 - Semester I

Course Code	Course Name	Credits	Contact Hours	Internal Marks	Practical Marks	EOS Marks	Total Marks
MM101	Fundamentals of Computer & Office Automation	4	60	--	40	60	100
MM102	Programming Using 'C'	4	60	--	40	60	100
MN101	Computer Architecture	2	30	20	---	30	50
OE101	a) Basics of Management b) Counselling	2	30	20	---	30	50
SEC101	Foreign Language	2	30	20	---	30	50
AEC101	Business Communication	2	30	20	---	30	50
VEC101	Environmental Science and Sustainability	2	30	20	---	30	50
IKS101	Indian Knowledge System	2	30	20	---	30	50
Total Credits		**20**	**300**	**120**	**80**	**300**	**500**

BSc CS I - Level 4.5 - Semester II

Course Code	Course Name	Credits	Contact Hours	Internal Marks	Practical Marks	EOS Marks	Total Marks
MM103	Web Technology	4	60	--	40	60	100
MM104	Object-Oriented Programming using C++	4	60	--	40	60	100
MN102	Operating System	2	30	20	---	30	50
OE102	a) Fundamentals of Digital Marketing b) Stress Management	2	30	20	---	30	50
VSC101	Algorithms	2	30	20	---	30	50
SEC102	Mathematical Foundations	2	30	20	---	30	50
AEC102	Technical Writing	2	30	20	---	30	50
VEC102	Democracy & Governance	2	30	20	---	30	50
Total Credits		**20**	**300**	**120**	**80**	**300**	**500**

Exit option: Award of UG Certificate in Major with 40 credits and an additional 4 credits core SWAYAM course/ Internship

BSc CS II - Level 5.0 - Semester III

Course Code	Course Name	Credits	Contact Hours	Internal Marks	Practical Marks	EOS Marks	Total Marks
MM201	Advanced Web Technology	4	60	--	40	60	100
MM202	Java Programming	4	60	--	40	60	100
MN201	Database Management System	4	60	40		60	100
OE201	a) Advanced Excel b) E-Commerce	2	30	20	---	30	50
VSC201	Data Analytics Basics	2	30	20	---	30	50
AEC201	MOOC-I	2	30	20	---	30	50
CC	Sports	2	30	50	---	--	50
Total Credits		**20**	**300**	**120**	**80**	**300**	**500**

BSc CS II - Level 5.0 - Semester IV

Course Code	Course Name	Credits	Contact Hours	Internal Marks	Practical Marks	EOS Marks	Total Marks
MM203	Python Programming	4	60	--	40	60	100
MM204	Data Structures	4	60	--	40	60	100
MN206	Computer Networks	4	60	40		60	100
OE202	a) Data Visualization b) Power BI	2	30	20	---	30	50
SEC201	Object-Oriented Design & UML	2	30	20	---	30	50
AEC202	Soft Skills	2	30	20	---	30	50
FP201	Mini Project	2	30	20	---	30	50
Total Credits		**20**	**300**	**120**	**80**	**300**	**500**

Exit option: Award of UG Diploma in Major with 80 credits and an additional 4 credits core SWAYAM course/ Internship

BSc CS III - Level 5.5 - Semester V

Course Code	Course Name	Credits	Contact Hours	Internal Marks	Practical Marks	EOS Marks	Total Marks
MM301	Mobile Application Development	4	60	--	40	60	100
MM302	.NET Technology	4	60	--	40	60	100
ME301	a) Data Science b) Artificial Intelligence	4	60	40	---	60	100
MN301	Cloud Computing	4	60	--	40	60	100
MN302	Information Security	2	30	20	---	30	50
VSC301	Software Testing	2	30	20	---	30	50
Total Credits		**20**	**300**	**120**	**80**	**300**	**500**

BSc CS III - Level 5.5 - Semester VI

Course Code	Course Name	Credits	Contact Hours	Internal Marks	Practical Marks	EOS Marks	Total Marks
MM303	Full Stack Web Development	4	60	--	40	60	100
MM304	Linux Administration	4	60	--	40	60	100
ME302	a) Big Data Analytics b) Machine Learning	4	60	40	---	60	100
MN303	API Development & Microservices	4	60	--	40	60	100
FP301	Major Project	4	60	40	---	60	100
Total Credits		**20**	**300**	**120**	**80**	**300**	**500**

Exit option: Award of UG Degree in Major with 120 credits

BSc CS IV - Level 6.0 Honours Degree - Semester VII

Course Code	Course Name	Credits	Contact Hours	Internal Marks	Practical Marks	EOS Marks	Total Marks
MM401	Blockchain Technology	4	60	--	40	60	100
MM402	DevOps	4	60	--	40	60	100
MM403	Cyber Security	4	60	40	---	60	100
ME401	a) Deep Learning b) Generative AI	4	60	40	---	60	100
MN401	Research Methodology	4	60	40	---	60	100
Total Credits		**20**	**300**	**120**	**80**	**300**	**500**

BSc CS IV - Level 6.0 Honours Degree - Semester VIII

Code	Course Title	Credits	Contact Hours	Internal	EOS Marks	Marks
PR401	**Industry Project**	16	16 weeks			400
	Project Documentation				100	
	Presentation				100	
	Evaluation by Industry				100	
	Viva-Voce				100	
SEC401	MOOC	4	-	40	60	100
		20				**500**

Award of Four years UG Honours Degree in Major and Minor with 160 credits

BSc CS IV - Level 6.0 Honours with Research Degree - Semester VII

Course Code	Course Name	Credits	Contact Hours	Internal Marks	Practical Marks	EOS Marks	Total Marks
MM401	Blockchain Technology	4	60	--	40	60	100
MM402	Quantum Computing	4	60	--	40	60	100
MM403	Cyber Security	4	60	40	---	60	100
ME401	a) Deep Learning b) Generative AI	4	60	40	---	60	100
MN402	Research Methodology	4	60	40	---	60	100
Total Credits		**20**	**300**	**120**	**80**	**300**	**500**

BSc CS IV - Level 6.0 Honors with Research Degree - Semester VIII

Code	Course Title	Credits	Contact Hours	Internal	EOS Marks	Marks
RP401	**Research Project**	16	16 weeks			400
	Project Documentation				100	
	Presentation				100	
	Evaluation by Industry				100	
	Viva-Voce				100	
SEC401	MOOC	4	-	40	60	100
		20				**500**

Award of Four years UG Honours with Research Degree in Major and Minor with 160 credits