Karmaveer Bhaurao Patil, University, Satara

(Cluster University)

Dhananjayrao Gadgil College of Commerce, Satara

(A Constituent College of Karmaveer Bhaurao Patil, University, Satara)

B.C.A. (Bachelor of Computer Applications)

Programme and Credit Structure as per NEP 2020

(As per Government of Maharashtra Letter No - क्र.एनईपी - २०२२ / प्र. क्र. ०९ / वशी-३शकानावनाक१३मार२०२४)

The degree shall be titled as 'Bachelor of Computer Applications' under the faculty of commerce with effect from the academic year 2024-25

Bachelor of Computer Applications**(UG Certificate in Computer Applications)**Sem.I&IIfromAcademicYear2024-25

Bachelor of Computer Applications**(UG Diploma in Computer Applications)**Sem.III& IVfromAcademicYear2025-26

Bachelor of Computer Applications **(Bachelor Degree in Computer Applications**)Sem.V &VIfromAcademicYear2026-27

1. Introduction: Bachelor of Computer Application (3 years) program / degree is a specialized program in Computer Applications. It builds the student on studies in applied use of computers and to become competent in the current race and development of new computational era. The duration of the study is of six semesters, which is completed in three years. The program is based on NEP 2020 comprising 132 credit points.

2. Objective: 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.

3. Eligibility: Candidate should have passed standard XII (10+2) in any stream or government approved equivalent diploma in Engineering/ Technology from any recognized Board or Vocational stream. A candidate who has completed qualifying qualification from any Foreign Board /University must obtain an equivalence certificate from Association of Indian Universities (AIU) or competent body in India.

4. PEO, PO and CO Mappings:

A) **Program Educational Outcomes**: After completion of this program, the graduates students would:

PEO I	Technical Expertise	Implement fundamental domain knowledge of core courses for developing effective computing solutions by in corporating creativity and logical reasoning.
PEO II	Successful Career	Deliver professional services with updated technologies in Computer application based career.
PEO III	Inter disciplinary and Life Long Learning	Develop leadership skills and incorporate ethics, team work with effective communication & time management in the profession. Undergo higher studies, certifications and Technology research as per market needs.

B) Program Outcomes (PO's): After completion of program Students/graduates will be able to:

PO1: Apply knowledge of ICT in solving business problems.

PO2: Learn various programming languages and custom software.

PO3: Design component, or processes to meet the needs within realistic constraints.

PO4: Identify, formulate, and solve problems using computational temperaments.

PO5: Comprehend professional and ethical responsibility in computing profession.

PO6: Express effective communication skills.

PO7: Recognize the need for interdisciplinary, and an ability to engage in life-long learning.

PO8: Knowledge of contemporary issues and emerging developments in computing profession.

PO9: Utilize the techniques, skills and modern tools, for actual development process.

C) **Course Outcome(s):** Every individual course under this program has course outcomes (CO).The course outcomes rationally match with program educational objectives. The mapping of PEO, PO and CO is as illustrated below:

Program Educational Objectives	Thrust Area	Program Outcome	Course Outcome
PEOI	Technical Expertise	PO1,PO2,PO3,PO9	All Core and Lab courses
PEO II	Successful Career	PO4,PO5,PO6	All AEC courses
PEO III	Interdisciplinary and Lifelong Learning	PO7,PO8	All Electives

5. Eligibility of Core the Faculty: Assistant Professor: Master of Computer Applications (M.C.A), M.C.S ,SET, NET, Ph.D.

6. Medium of Instruction: The medium of instructions shall be in English.

7. Intake Capacity: Intake capacity of the B.C.A. programme will not more than 60 students per batch.

8. A) **Scheme of Examination& Standard of Passing**: As per the decision of the concern Board of Studies or Competent Authority.

Sr. No.	Scheme of Examination	Minimum Marks for Passing	Marks
1	Semester End Examination	32	80
2	Continuous Comprehensive Evaluation	08	20
		Total	**100**
Note: Minimum 40% Marks Required for Passing and there is separate head of Passing for Semester End Exam and Continuous Comprehensive Evaluation.			

B) Standard of Passing Rules:

I. A candidate must obtain minimum 40% of the marks in each University, internal examination paper, lab course as well as Field Project, Community Engagement Program, Mini and Minor Project.

II. There shall be a separate head of passing in Theory, Internal, Lab Course and Project examination. However, ATKT rules shall be made applicable in respect of theory and lab courses (University Examination) only.

III. A candidate who fails in any number of subjects during semester–I &II shall admitted to B.C.A.-II (appear for semester–III & Semester IV examination).

IV. However the candidate shall not be admitted to B.C.A-III (Semester-V) unless he/she passedinall the subjects at B.C.A.-I(Semester-I & Semester-II).

V. A candidate who fails in any number of subjects during Semester-III & IV shall be admitted for B.C.A.-III & allowed to appear for Semester–V&VI examinations.

VI. However under the National Education Policy the rules extended by KBP University, time to time regarding ATKT will be applicable.

9. Re-entry or Lateral Entry: Students, opting for exits at any level, will have the option to re-enter the programme from where they had left off, in the same or in a different higher education institution within three years of exit and complete the degree programme within the stipulated maximum period of seven years from the date of admission to first year UG. Re-entry at various levels for lateral entrants in academic programmes shall be based on the earned and valid credits as-deposited and accumulated in the Academic Bank of Credits (ABC) through Registered Higher Education Institutions (RHEI) and proficiency test records. Lateral entry into the programme of study leading to the UG Certificate / UG Diploma / Three year UG Degree will be based on the validation of prior learning outcomes achieved and subject to availability based on intake capacity.

10. Program Specific Outcomes (PSO):

1. Program will enable students to understand basics to advance knowledge of commercial and IT sector.
2. Program will enable students to provide business skills in banking, finance and IT.
3. Program will enable students to provide managerial skills for banking, finance and IT

11. Program Outcomes (PO): After completing B.C.A. Programme the students will be able to:-

1. Acquire the different skills necessary for IT sector.
2. Identify the problems and challenges faced by IT Professionals.
3. Abilities to solve managerial and functional problems of IT sector.
4. Identify role and importance of technology in commercial sector.
5. Analyse the day to day problems in any IT Industry.
6. Analyse comprehensive skills required for problem solving in IT Industry.
7. Identify professional and logical problem solving approach required for any IT Industry.
8. Impart intrapersonal and interpersonal development required for IT Industry.
9. Develop practical oriented approach among students.

12. Semester, NSQF Level and Exit Points

Sr. No.	Semester	Year	Year	Credits	Level	Exit Points& Award
1	Sem. I & II	2024-25	1 Year	44	4.5	UG Certificate
2	Sem. III & IV	2025-26	2 Year	88	5.0	UG Diploma
3	Sem. V & VI	2026-27	3 Year	132	5.5	Bachelor of Computer Applications

13. Credit distribution for three years Bachelor's Programme

Sr. No.	Course	3 Year Degree Programme		
		Courses	Credits	%
		(3 Year)	(3 Year)	
1	Major	14	52	60%
2	VSC	4	8	
3	IKS	1	2	
4	OJT	1	4	
5	FP	2	4	
6	Electives	2	8	
7	Minor	5	18	13%
8	OE	4	12	9%
9	SEC	3	6	4.5%
10	AEC	4	8	6%
11	VEC	2	4	3%
12	CEP	1	2	1.5%
13	CC	2	4	3%
	Total	**45**	**132**	**100**%

Programme Structure under As per National Education Policy 2020 -

BCA-I Semester-I			
Sr.	Components	Course (Subject)	Credits
1	Major	Fundamentals of Computers	4
2	Major	Programming Concepts Using C	4
3	OE	Reasoning Ability / Economics / Principles of Management P-I	4
4	VSC	Lab Course - I (Fundamentals of Computers and Programming Concepts Using C)	2
5	SEC	Digital Marketing Tools	2
6	AEC	Business Communication P-I	2
7	VEC	Environmental Science	2
8	IKS	Ancient Indian Technology	2
		Total	**22**
BCA-I Semester-II			
Sr.	Components	Course (Subject)	Credits
1	Major	Object Oriented Programming with C++	4
2	Major	Web Technology	4
3	Minor	Software Engineering	2
4	OE	Reasoning Ability / Economics / Principles of Management P-II	4
5	VSC	Lab Course –II (Object Oriented Programming withC++ and Web Technology)	2
6	SEC	Database Management System	2
7	AEC	Business Communication P-II	2
8	VEC	Democracy, Good Governance & Constitution of India	2
		Total	**22**

Exit option: Award of UG Certificate in Major with 44 credits and an additional 4 credits core NSQF course/ Internship OR Continue with Major and Minor

BCA-II Semester-III

Sr.	Components	Course (Subject)	Credits
1	Major	Computer Network	4
2	Major	RDBMS	4
3	Minor	Statistical Methods	4
4	OE	Macro Economics/Financial Accounting Skills/Fundamental of Entrepreneurship P - I	2
5	VSC	Lab Course III(Based on RDBMS)	2
6	AEC	Business Communication P-III	2
7	FP	Field Project	2
8	CC	NSS/NCC/Physical Education	2
		Total	**22**

BCA-II Semester-IV

Sr.	Components	Course (Subject)	Credits
1	Major	Linux Operating System	4
2	Major	Visual Programming	4
3	Minor	Computer Mathematics	4
4	OE	Macro Economics /Financial Accounting Skills /Fundamental of Entrepreneurship P - II	2
5	SEC	Computer Hardware and Networking	2
6	AEC	Business Communication P-IV	2
7	CEP	Window/Web Applications Development for Society	2
8	CC	NSS/NCC/Physical Education	2
		Total	**22**

Exit option: Award of UG Certificate in Major with 88 credits and an additional 4 credits core NSQF course/ Internship OR Continue with Major and Minor

BCA-III Semester-V

Sr.	Components	Course (Subject)	Credits
1	Major	Java Programming	4
2	Major	Cloud Computing	4
3	Major	PHP using MySQL	2
4	Electives	Indian Economy/ Modern Management Practices	4
5	Minor	Computer Graphics	4
6	VSC	Lab Course-IV(PHP using MySQL)	2
7	FP	Field Project	2
		Total	**22**
BCA-III Semester-VI			
Sr.	**Components**	**Course (Subject)**	**Credits**
1	Major	Content Management System	4
2	Major	Python Programming	4
3	Major	Cyber Security	2
4	Electives	Public Finance / Lean and Talent Management	4
5	Minor	Data Mining and Data Warehousing	4
6	OJT	On Job Training	4
		Total	**22**

Exit option: Award of UG Certificate in Major with 132 credits OR Continue with Major and Minor.

Chairman
BoS in Computer Applications

Secretary
Academic Council

Chairman
Academic Council