Shree H. V. P. Mandal's

Degree College of Physical Education, Amravati.

(An Autonomous College)

FACULTY OF SCIENCE & TECHNOLOGY

(SCIENCE GROUP)

CURRICULUM SCHEME

OF

BACHELOR OF COMPUTER APPLICATION

(Credit Based Semester Pattern)

Program Code: BCA

Introduced from the Session 2015-2016

Programme Structure for BCA

1. **Programme Name in Complete**: Bachelor of Computer Application

2. **Programme Name in Short**: BCA

3. **Nature of the Programme (Certificate / Diploma/ UG Degree / PG Diploma / PG Degree):** UG Degree

4. **Objective:** The Programme Educational Objectives of BCA programme are:
    1. To impart the students, latest comprehensive and skill based knowledge with equal emphasis on theory and practice in the field of information technology.
    2. To provide students with sound academic base from which an advanced career in Computer Application can be developed.
    3. To prepare students with conceptual grounding in computer usage as well as its practical business in order to craft the students as a versatile computer professional who can provide service in almost all fields of computer application in industry, government, academia, research, entrepreneurial pursuit and consulting firms.
    4. To prepare students to undertake higher studies in computers and IT jobs.
    5. To prepare graduates who will contribute to society as broadly educated, expressive, ethical and responsible citizens with proven expertise.
    6. To prepare graduates who will achieve peer-recognition; as an individual or in a team; through demonstration of good analytical, design and implementation skills.

5. **Duration of the Programme :** Three Years; Full Time

6. **Examination Pattern (Annual/Semester):** Semester

7. **If Semester pattern then Number of Semesters:** Six Semester

8. **Marking Scheme (Percentage/Credit):** Credit

9. **Eligibility:** Students who passed 12th standard exam with mathematics OR passed three years diploma in electronics and computer engineering OR 10+2 level MCVC in electronics.

10. **Total working days:** Per Annual session : 200 days
    Per Semester: 100 days

11. **Teaching and Examination Scheme:** As prescribed in the curriculum design by the Subject Board and approved by Academic Board time to time.

12. Admission rules/conditions for every year/semester.

Sr. No.	Programme and Level	Type of Admission	Eligibility	Remark
1	BCA First Year Sem. I	Direct Admission	Students who passed 12th standard exam with mathematics OR passed three years diploma in electronics and computer engineering OR 10+2 level MCVC in electronics.	
2	BCA First Year Sem. II	Natural Growth	----	
3	BCA Second Year Sem. III	Natural Growth	Passed Minimum 50% of total passing heads of FYBCA Semester I and Semester II	
4	BCA Second Year Sem. IV	Natural Growth	----	
5	BCA Third Year Sem. V	Natural Growth	Clearly Passed in FYBCA and Passed Minimum 50% of total passing heads of SYBCA Semester III and Semester IV	
6	BCA Third Year Sem. VI	Natural Growth	----	

13. Programme Outcomes: The following Programme Outcomes are attained after completion of this UG programme:

PO1	Students will contribute to society as broadly educated, expressive, ethical and responsible citizens with proven expertise for working as an individual or in multidisciplinary teams with positive attitude.
PO2	Create awareness and attitude of concern about environmental problems.
PO3	Students can communicate efficiently to deliver their knowledge effectively.
PO4	Able to pursue advanced education in relevant subjects.

14. Programme Specific Outcomes (PSO): BCA programme has been designed to prepare graduates to attain the following programme specific outcomes:

PSO1	Students learn the computer usage as well as its practical knowledge in order to craft them as a versatile computer professional who can provide service in almost all fields of computer application in industry, entrepreneurial pursuit and consulting firms.
PSO2	Achieve ability to identify, analyze, formulate and develop computer applications by using appropriate modern computing tools and techniques.
PSO3	Students acquire latest comprehensive and skilled based knowledge with equal emphasis on theory & practical in the field of IT.

Curriculum Scheme of First Year B.C.A. Semester I

SR. NO.	SUBJECT CODE	SUBJECT SHORT NAME	NAME OF SUBJECT	TEACHING SCHEME (Lectures/ Week)			CREDIT	EXAMINATION SCHEME									GRAND TOTAL
								THEORY				PRACTICAL					
				Th.	Pr.	Total / Week		Duration of Paper (Hrs)	MAX. MARKS			Duration of Exam (Hrs)	MAX. MARKS				
									Theory Exam	College Asses.	Total		Pract.	Viva Voce	College Asses.	Total	
1	15BCA101	CFOS	COMPUTER FUNDAMENTAL AND OPERATING SYSTEM	6		6	4	3	60	15	75	3					
2	15BCA102	PMC	PROGRAMMING METHODOLOGY USING C	6		6	4	3	60	15	75	3					
3	15BCA103	DT	DIGITAL TECHNIQUES	6		6	4	3	60	15	75	3					
4	15BCA104	FSBDP	FILE SYSTEM AND BUSINESS DATA PROCESSING	6		6	4	3	60	15	75	3					
5	15BCA105	DCN	DATA COMMUNICATION NETWORK	6		6	4	3	60	15	75	3					
6	15BCA106	CS-I	COMMUNICATION SKILLS – I	6		6	4	3	60	15	75	3					
7	15BCA107	LAB-I	Lab-I (C Language)		6	6	3	3					20	10	20	50	
8	15BCA108	LAB-II	Lab-II (DT)		6	6	3	3					20	10	20	50	
			TOTAL	36	12	48	30				450					100	550

Curriculum Scheme of First Year B.C.A. Semester II

SR. NO.	SUBJECT CODE	SUBJECT SHORT NAME	NAME OF SUBJECT	TEACHING SCHEME (Lectures/ Week)			CREDIT	EXAMINATION SCHEME									
								THEORY				PRACTICAL					GRAND TOTAL
				Th.	Pr.	Total / Week		Duration of Paper (Hrs)	MAX. MARKS			Duration of Exam (Hrs)	MAX. MARKS				
									Theory Exam	College Asses.	Total		Pract.	Viva Voce	College Asses.	Total	
1	15BCA109	AC	ADVANCED C	6		6	4	3	60	15	75	3					
2	15BCA110	DMS	DISCRETE MATHEMATICAL STRUCTURES	6		6	4	3	60	15	75	3					
3	15BCA111	RDBMS	RELATIONAL DBMS	6		6	4	3	60	15	75	3					
4	15BCA112	SAD/MIS	SYSTEM ANALYSIS & DESIGN AND MIS	6		6	4	3	60	15	75	3					
5	15BCA113	µP	MICROPROCESSOR	6		6	4	3	60	15	75	3					
6	15BCA114	CS-II	COMMUNICATION SKILLS– II	6		6	4	3	60	15	75	3					
7	15BCA115	LAB-III	Lab-III (Adv. C + µP)		6	6	3	3					20	10	20	50	
8	15BCA116	LAB-IV	Lab-IV (SQL Server)		6	6	3	3					20	10	20	50	
			TOTAL	36	12	48	30				450					100	550

Curriculum Scheme of Second Year B.C.A. Semester III

SR. NO.	SUBJECT CODE	SUBJECT SHORT NAME	NAME OF SUBJECT	TEACHING SCHEME (Lectures/ Week)			CREDIT	EXAMINATION SCHEME									
								THEORY				PRACTICAL					GRAND TOTAL
				Th.	Pr.	Total / Week		Duration of Paper (Hrs)	MAX. MARKS			Duration of Exam (Hrs)	MAX. MARKS				
									Theory Exam	College Asses.	Total		Pract.	Viva Voce	College Asses.	Total	
1	15BCA201	DS	Data Structure	6		6	4	3	60	15	75	3					
2	15BCA202	OOP using C++	Object Oriented Programming using C++	6		6	4	3	60	15	75	3					
3	15BCA203	WT	WEB TECHNOLOGY	6		6	4	3	60	15	75	3					
4	15BCA204	SET	SOFTWARE ENGINEERING & TESTING	6		6	4	3	60	15	75	3					
5	15BCA205	OS	Operating System	6		6	4	3	60	15	75	3					
6	15BCA206	EVS	Environment Science	3		3	2	3	--	50	50	3					
7	15BCA207	LAB-I	Lab-I (DS & OPP using C++)		9	9	4	3					20	10	20	50	
8	15BCA208	LAB-II	Lab-II (WT)		6	6	3	3					20	10	20	50	
			TOTAL	33	15	48	29				425					100	525

Curriculum Scheme of Second Year B.C.A. Semester IV

SR. NO.	SUBJECT CODE	SUBJECT SHORT NAME	NAME OF SUBJECT	TEACHING SCHEME (Lectures/ Week)			CREDIT	EXAMINATION SCHEME									
								THEORY				PRACTICAL					GRAND TOTAL
				Th.	Pr.	Total / Week		Duration of Paper (Hrs)	MAX. MARKS			Duration of Exam (Hrs)	MAX. MARKS				
									Theory Exam	College Asses.	Total		Pract.	Viva Voce	College Asses.	Total	
1	15BCA209	VB.NET	VISUAL BASIC.NET	6		6	4	3	60	15	75	3					
2	15BCA210	NS	NETWORK SECURITY	6		6	4	3	60	15	75	3					
3	15BCA211	NM	NUMERICAL METHODS	6		6	4	3	60	15	75	3					
4	15BCA212	JAVA	JAVA PROGRAMMING	6		6	4	3	60	15	75	3					
5	15BCA213	BSA	BUSINESS SYSTEM & APPLICATION	6		6	4	3	60	15	75	3					
6	15BCA214	DMng	DISASTER MANAGEMENT	3		3	2	3	--	50	50	3					
7	15BCA215	LAB-III	Lab-III (VB.NET)		9	9	4	3					20	10	20	50	
8	15BCA216	LAB-IV	Lab-IV (NM & JAVA)		6	6	3	3					20	10	20	50	
			TOTAL	33	15	48	29				425					100	525

Curriculum Scheme of Third Year B.C.A. Semester V

SR. NO.	SUBJECT CODE	SUBJECT SHORT NAME	NAME OF SUBJECT	TEACHING SCHEME (Lectures/ Week)			CREDIT	EXAMINATION SCHEME									GRAND TOTAL
								THEORY				PRACTICAL					
				Th.	Pr.	Total / Week		Duration of Paper (Hrs)	MAX. MARKS			Duration of Exam (Hrs)	MAX. MARKS				
									Theory Exam	College Asses.	Total		Pract.	Viva Voce	College Asses.	Total	
1	15BCA301	AJAVA	Adv. JAVA	6		6	4	3	60	15	75	3					
2	15BCA302	LINUX	LINUX & Shell Prog.	6		6	4	3	60	15	75	3					
3	15BCA303	.NET	ASP.NET USING C#.NET	6		6	4	3	60	15	75	3					
4	15BCA304	ADBMS	ADBMS	6		6	4	3	60	15	75	3					
5	15BCA305	SEM	SEMINAR		6	6	3								50	50	
6	15BCA306	LAB-I	Lab-I (Adv. JAVA)		6	6	3	3					20	10	20	50	
7	15BCA307	LAB-II	Lab-II (LINUX)		6	6	3	3					20	10	20	50	
8	15BCA308	LAB-III	Lab-III (ASP.NET& C#)		6	6	3	3					20	10	20	50	
			TOTAL	24	24	48	28				300					200	500

Curriculum Scheme of Second Year B.C.A. Semester VI

SR. NO.	SUBJECT CODE	SUBJECT SHORT NAME	NAME OF SUBJECT	TEACHING SCHEME (Lectures/ Week)			CREDIT	EXAMINATION SCHEME									GRAND TOTAL
								THEORY				PRACTICAL					
				Th.	Pr.	Total / Week		Duration of Paper (Hrs)	MAX. MARKS			Duration of Exam (Hrs)	MAX. MARKS				
									Theory Exam	College Asses.	Total		Pract.	Viva Voce	College Asses.	Total	
1	15BCA301	AJAVA	Adv. JAVA	6		6	4	3	60	15	75	3					
2	15BCA302	LINUX	LINUX & Shell Prog.	6		6	4	3	60	15	75	3					
3	15BCA303	.NET	ASP.NET USING C#.NET	6		6	4	3	60	15	75	3					
4	15BCA304	ADBMS	ADBMS	6		6	4	3	60	15	75	3					
5	15BCA305	SEM	SEMINAR		6	6	3								50	50	
6	15BCA306	LAB-I	Lab-I (Adv. JAVA)		6	6	3	3					20	10	20	50	
7	15BCA307	LAB-II	Lab-II (LINUX)		6	6	3	3					20	10	20	50	
8	15BCA308	LAB-III	Lab-III (ASP.NET& C#)		6	6	3	3					20	10	20	50	
			TOTAL	24	24	48	28				300					200	500