



ALVA'S COLLEGE

(AUTONOMOUS)

A Unit of Alva's Education Foundation (R.)
Affiliated to Mangalore University



STATE EDUCATION POLICY – 2024 [SEP-2024]

CURRICULUM STRUCTURE FOR BACHELOR OF COMPUTER APPLICATIONS (BCA)

MANGALOREUNIVERSITY

Suggested programme structure for the Under Graduate Programmes

[BCA,BCA(A.I&M.L),BCA(D.A)]

Semester	Course1	Course2	Course3	Elective/Optional	Course	Language	Compulsory	Total Credit	Total Working hour
I	5 (3T+2P)	5 (3T+2P)	5 T			3+3	2	23	4+4+4+4+5+4+4+2=31
II	5 (3T+2P)	5 (3T+2P)	5T			3+3	2	23	4+4+4+4+5+4+4+2=31
III	5 (3T+2P)	5 (3T+2P)	5T	2		3+3		23	4+4+4+4+5+4+4+2=31
IV	5 (3T+2P)	5 (3T+2P)	5T	2		3+3	2	25	4+4+4+4+5+2+4+4+2=33
V	8[(2x3T)+2P]]	8[(2x3T)+2P]]	8[(2x3T)+2P]				2	26	3+3+4+3+3+4+3+3+4+2=32
VI	3T	3T	3T		3T	ctwork 12		24	3+3+3+3+24=36
								144	

Note:

- **Course1andCourse2:ItoIVSemester:Theory3credit=4contacthours&Practical2 credit=4 contact hours**
- **Course3:ItoIVSemester:Theory5credit=5contacthours**
- **Course1,Course2andCourse3:VandVISemester:Theory3credit=3contacthours& Practical 2 credit=4 contact hours**
- **Elective/Optional:2credit=2contacthours**
- **Languages:3credit=4contacthours**
- **Compulsory:2credit=2contacthours**

CURRICULUM STRUCTURE FOR I TO VI SEMETER BCA

Semester I								
Sl. No	Course Code	Title of the Course	Category of Courses	Teaching Hours per Week	SEE	IA	Total Marks	Credits
1	BCA-1.1	Fundamentals of Information Technology	Theory	4	80	20	100	3
2	BCA -1.2	Fundamentals of Information Technology Lab	Practical	4	40	10	50	2
3	BCA -1.3	Problem Solving using C	Theory	4	80	20	100	3
4	BCA -1.4	C Programming Lab	Practical	4	40	10	50	2
5	BCA -1.5	Computational Mathematics	Theory	5	80	20	100	5
6		Language-I	Lang	4	80	20	100	3
7		Language-II	Lang	4	80	20	100	3
8		Constitutional Values	Compulsory	3	40	10	50	2
Sub - Total				32	520	130	650	23

Semester II								
Sl. No	Course Code	Title of the Course	Category of Courses	Teaching Hours per Week	SEE	IA	Total Marks	Credits
1	BCA-2.1	Data Structure using C	Theory	4	80	20	100	3
2	BCA-2.2	Data Structures Lab	Practical	4	40	10	50	2
3	BCA-2.3	Database Management System	Theory	4	80	20	100	3
4	BCA-2.4	Database Management System Lab	Practical	4	40	10	50	2
5	BCA -2.5	Computer Organization and Architecture	Theory	5	80	20	100	5
6		Language-I	Lang	4	80	20	100	3
7		Language-II	Lang	4	80	20	100	3
8		Environmental Studies	Compulsory	3	40	10	50	2
Sub - Total				32	520	130	650	23

Semester III								
Sl. No	Course Code	Title of the Course	Category of Courses	Teaching Hours per Week	SEE	IA	Total Marks	Credits
1		Language-I	Lang	4	80	20	100	3
2		Language-II	Lang	4	80	20	100	3
3	BCA —3.1	Database Management System	Core	4	80	20	100	3
4	BCA -3.2	C# and Dotnet Framework	Core	4	80	20	100	3
5	BCA–3.3	Computer Networks	Core	5	80	20	100	5
6	BCA–3.4	Database Management System Lab	practical	4	40	10	50	2
7	BCA–3.5	C# and Dotnet Framework Lab	practical	4	40	10	50	2
8	BCA–3.6	A) Open Source Tools B) Web Content Management System C) DEVOPS	Elective	2	40	10	50	2
Sub- Total				31	520	130	650	23

Semester IV								
Sl. No	Course Code	Title of the Course	Category of Courses	Teaching Hours per Week	SEE	IA	Total Marks	Credits
1		Language-I	Lang	4	80	20	100	3
2		Language-II	Lang	4	80	20	100	3
3	BCA –4.1	Python Programming	Core	4	80	20	100	3
4	BCA -4.2	Advanced JAVA and J2EE	Core	4	80	20	100	3
5	BCA –4.3	Operating System Concepts	Core	5	80	20	100	5
6	BCA –4.4	Python Programming Lab	practical	4	40	10	50	2
7	BCA –4.5	Advanced JAVA and J2EE Lab	practical	4	40	10	50	2
8	BCA –4.6	A) Distributed Computing B) Object Oriented Analysis & Design C) Digital Image Processing	Elective	2	40	10	50	2
9	BCA –4.7	Internet Basics	Compulsory	2	40	10	50	2
Sub- Total				33	560	140	700	25

Semester V								
Sl. No	Course Code	Title of the Course	Category of Courses	Teaching Hours per Week	SEE	IA	Total Marks	Credits
1	BCA-5.1	Software Engineering	Core	3	80	20	100	3
2	BCA-5.2	Web Development	Core	3	80	20	100	3
3	BCA-5.3	Design Analysis and Algorithm	Core	3	80	20	100	3
4	BCA-5.4	Statistical Computing and R Programming	Core	3	80	20	100	3
5	BCA-5.5	Cloud Computing	Core	3	80	20	100	3
6	BCA-5.6	Cryptography and Network Security	Core	3	80	20	100	3
7	BCA-5.7	Design Analysis and Algorithm Lab	Practical	4	40	10	50	2
8	BCA-5.8	R Programming Lab	Practical	4	40	10	50	2
9	BCA-5.9	Web Development Lab	Practical	4	40	10	50	2
10	BCA-5.10	Data Analytics using Excel	Compulsory	2	40	10	50	2
Sub- Total				32	640	160	800	26

Semester VI								
Sl. No	Course Code	Title of the Course	Category of Courses	Teaching Hours per Week	SEE	IA	Total Marks	Credits
1	BCA- 6.1	Artificial Intelligence and Applications	Core	3	80	20	100	3
2	BCA- 6.2	Principles Cyber Security	Core	3	80	20	100	3
3	BCA- 6.3	Fundamentals of Data Science	Core	3	80	20	100	3
4	BCA- 6.4	Digital Marketing	Core	3	80	20	100	3
4	BCA- 6.5	Project Work	Project Work	24	300	100	400	12
Sub- Total				36	620	180	800	24