

Department of Computer Science

CURRICULUM & CREDIT FRAMEWORK AND FORMATIVE ASSESSMENT FOR BACHELOR OF COMPUTER APPLICATIONS 4 YEAR PROGRAM (Scheme of Examinations under National Education Policy 2020)

BACHELOR OF COMPUTER APPLICATIONS(BCA):

First Year Semester I					
Sr.No	Courses	Course Title	Course Code	Remarks	Credits
1	Major 1	Mathematical Foundations of Computer Science	23BCA401DS01	Compulsory	4
2	Major 2	Computer Fundamentals & Problem Solving using C	23BCA401DS02	Compulsory	4
3	Minor 1 in Commerce	Business Organisation and Management	24COM401MI01	Students must select one minor subject from the six options provided	4
	Minor 2 in Physical Science	Basics Concepts of Chemistry	24CHE401MI01		
	Minor 3 in Mathematics	Basic Mathematics	24MAT401MI01		
	Minor 4 in Life Science	Basics in Biotechnology	24CBT401MI01		
	Minor 5 in Statistics	Introduction to Statistics	24STA401MI01		
	Minor 6 in Management	Managerial Skills	24IMS401MI01		
4	MDC 1 in Home Science	Basics of Home Science-I	24HSCX01MD01	Students must select one MDC subject from the six options provided	3
	MDC 2 in Music Vocal	Basic Components of Hindustani Music Vocal	24MUSVX01MD01		
	MDC 3 in Music Instrumental	Basic Studies in Hindustani Instrumental Music	24MUSIX01MD01		
	MDC 4 in Sociology	Society & Culture in India	24SOCX01MD01		
	MDC 5 in Commerce	Financial Literacy	24COMX01MD01		
	MDC 6 in Management	Foundation of Management	24IMSX01MD01		
5	Skill Enhancement Course(SEC)	Web Development-I	24CSC401SE01	Compulsory	3
6	Value Added Course(VAC)	Environmental Science	23EVSX01VA01	Compulsory	2
7	Ability Enhancement Course(AEC)	English-I	23ENGX01AE01	Compulsory	2

*MDC-Multidisciplinary Course

Scheme of Distribution of Marks:

Sr. No	Course Title	Course Code	Theory Marks		Practical Marks		Total Marks	Exam Time	Credit Distribution		
			Int.	Ext.	Int.	Ext.			L	T	P
1	Mathematical Foundations of Computer Science	23BCA401DS01	30	70	0	0	100	3 hrs	4	0	0
2	Computer Fundamentals & Problem Solving using C	23BCA401DS02	25	50	5	20	100	3 hrs	3	0	1
3	Business Organisation and Management	24COM401MI01	70	30	---	---	100	3 hrs	4	0	0
	Basics Concepts of Chemistry	24CHE401MI01	15	35	15	35	100	3 hrs	4	0	0
	Basic Mathematics	24MAT401MI01	30	70	---	---	100	3 hrs	3	1	0
	Basics in Biotechnology	24CBT401MI01	30	70	---	---	100	3 hrs	4	0	0
	Introduction to Statistics	24STA401MI01	25	50	25	---	100	3 hrs	3	0	1
	Managerial Skills	24IMS401MI01	70	30	---	---	100	3 hrs	3	1	0
4	Basics of Home Science-I	24HSCX01MD01	15	35	5	20	75	3 hrs	2	0	1
	Basic Components of Hindustani Music Vocal	24MUSVX01MD01	---	---	---	---	75	3 hrs	2	0	1
	Basic Studies in Hindustani Instrumental Music	24MUSIX01MD01	---	---	---	---	75	3 hrs	2	0	1
	Society & Culture in India	24SOCX01MD01	---	---	---	---	75	3 hrs	2	0	1
	Financial Literacy	24COMX01MD01	---	---	---	---	75	3 hrs	2	0	1
	Foundation of Management	24IMSX01MD01	---	---	---	---	75	3 hrs	2	0	1
5	Web Development-I	24CSC401SE01	---	---	---	---	75	3 hrs	1	0	2
6	Environmental Science	23EVSX01VA01	---	---	---	---	50	3 hrs	2	0	0
7	English-I	23ENGX01AE01	---	---	---	---	50	3 hrs	2	0	0

Scheme of Distribution of Formative Assessment:

Multidisciplinary Course For Two (02) credits theory and one (01) credit practical (Only for 2025-2026 session)	Marks distribution
Written test(2*10)	20
Lab work (practical file)/ Field work (report)/ Portfolio	20
Assignment/ Case study/ Mini Project (2*10)	20
Seminar/ Presentation	10
Attendance	05
Total	75

Ability Enhancement Courses For Two (02) Credits Theory	Marks distribution
Written test(2*5)	10
Peer discussion/ Debate/ Extempore Speech (2*10)	20
Role Play	05
Essay/ Article/ Report Writing	10
Attendance	05
Total	50

Skill Enhancement Courses For two (02) credits theory and one (01) credit practical (Only for 2025-2026 session)	Marks distribution
Written test(2*10)	20
Lab work (practical file)/ Field work (report)/ Portfolio	20
Assignment/ Case study/ Mini Project (2*10)	20
Seminar/ Presentation	10
Attendance	05
Total	75

Value Added Courses For Two (02) Credits theory	Marks distribution
Written test(2*10)	20
Class Assignments/ Case Study/ Mini Project (2*5)	10
Quiz/ Seminar/ Group Discussion/ Debate (2*7.5)	15
Attendance	05
Total	50

First Year Semester II

Sr. No	Courses	Course Title	Course Code	Remarks	Credits
1	Major 1	Digital Logic Design	23BCA402DS01	Compulsory	4
2	Major 2	Data and File Structures	23BCA402DS02	Compulsory	4
3	Minor 1 in Commerce	Fundamentals of Accounting	24COM402MI01	Students must select one minor subject from the six options provided	4
	Minor 2 in Physical Science	Chemistry of Metals & Non- Metals, Hydrocarbons and Solutions	25CHE402MI01		
	Minor 3 in Statistics	Elementary Probability Theory	24STA402MI01		
	Minor 4 in Life Science	Principles of Gene Manipulation	24CBT402MI01		
	Minor 5 in Mathematics	Business Mathematics	24MAT402MI01		
	Minor 6 in Management	Corporate Leadership	24IMS402MI01		
4	MDC 1 in Home Science	Basics of Home Science-II	24HSCX02MD01	Students must select one MDC subject from the six options provided	3
	MDC 2 in Music Vocal	Applied Theory of Hindustani Music Vocal	24MUSVX02MD01		
	MDC 3 in Music Instrumental	Technical Components of Hindustani Music Instrumental	24MUSIX02MD01		
	MDC 4 in Sociology	Rural Society in India	24SOCX02MD02		
	MDC 5 in Commerce	Business Documentation	24COMX02MD01		
	MDC 6 in Management	Marketing Management	24IMSX02MD01		
5	Skill Enhancement Course(SEC)	Web Development-II	24CSC402SE01	Compulsory	3
6	Value Added Course(VAC)	Digital and Technological Solutions	23CSAX01VA01	Compulsory	2
7	Ability Enhancement Course(AEC)	Hindi Bhasha Sanvardhan (One)	23HNDX01AE01	Students must select one AEC subject from the 2 options provided	2
		Sanskrit and Modern Indian Languages	23SKTX01AE01		

Scheme of Distribution of Marks:

Sr. No	Course Title	Course Code	Theory Marks		Practical Marks		Total Marks	Exam Time	Credit Distribution		
			Int.	Ext.	Int.	Ext.			L	T	P
1	Digital Logic Design	23BCA402DS01	30	70	0	0	100	3 hrs	4	0	0
2	Data and File Structures	23BCA402DS02	25	50	5	20	100	3 hrs	3	0	1
3	Fundamentals of Accounting	24COM402MI01	70	30	---	---	100	3 hrs	4	0	0
	Chemistry of Metals & Non- Metals, Hydrocarbons and Solutions	25CHE402MI01	15	35	15	35	100	3 hrs	4	0	0
	Elementary Probability Theory	24STA402MI01	30	70	---	---	100	3 hrs	3	1	0
	Principles of Gene Manipulation	24CBT402MI01	30	70	---	---	100	3 hrs	4	0	0
	Business Mathematics	24MAT402MI01	25	50	25	---	100	3 hrs	3	0	1
	Corporate Leadership	24IMS402MI01	70	30	---	---	100	3 hrs	3	1	0
4	Basics of Home Science-II	24HSCX02MD01	15	35	5	20	75	3 hrs	2	0	1
	Applied Theory of Hindustani Music Vocal	24MUSVX02MD01	---	---	---	---	75	3 hrs	2	0	1
	Technical Components of Hindustani Music Instrumental	24MUSIX02MD01	---	---	---	---	75	3 hrs	2	0	1
	Rural Society in India	24SOCX02MD02	---	---	---	---	75	3 hrs	2	0	1
	Business Documentation	24COMX02MD01	---	---	---	---	75	3 hrs	2	0	1
	Marketing Management	24IMSX02MD01	---	---	---	---	75	3 hrs	2	0	1
5	Web Development-II	24CSC402SE01	---	---	---	---	75	3 hrs	1	0	2
6	Digital and Technological Solutions	23CSAX01VA01	---	---	---	---	50	3 hrs	2	0	0
7	Hindi Bhasha Sanvardhan (One)	23HNDX01AE01	---	---	---	---	50	3 hrs	2	0	0
	Sanskrit and Modern Indian Languages	23SKTX01AE01	---	---	---	---	50	3 hrs	2	0	0

Second Year Semester III					
Sr.No	Courses	Course Title	Course Code	Remarks	Credits
1	Major 1	Operating System	24BCA403DS01	Compulsory	4
2	Major 2	Object Oriented Programming Using C++	24BCA403DS02	Compulsory	4
3	Major 3	Database Management Systems	24BCA403DS03		4
4	Minor 1 in Commerce	Business Policy and Strategy	25IMS403MI01	Students must select one minor subject from the six options provided	4
	Minor 2 in Physical Science	Molecular Structure, Thermodynamics, Equilibrium of alkyl halides	25CHE403MI01		
	Minor 3 in Statistics	Statistical Inference	25STA403MI01		
	Minor 4 in Life Science	Principles and applications of Agriculture Biotechnology,	25CBT403MI01		
	Minor 5 in Mathematics	Operation Research	25MAT403MI01		
	Minor 6 in Management	Corporate Accounting	25COM403MI01		
5	MDC 1 in Home Science	Basics of Home Science-III	25HSCX03MD03	Students must select one MDC subject from the six options provided	3
	MDC 2 in Music Vocal	Essentials of Music Vocal	25MUSVX03MD01		
	MDC 3 in Music Instrumental	Music Instrumental	25MUSVX03MD01		
	MDC 4 in Sociology	Foundation of Sociological Thought	25SOCX03MD03		
	MDC 5 in Commerce	Corporate Governance	25COM403MD01		
	MDC 6 in Management	Entrepreneurship & MSME	25IMSX03MD01		
6	Skill Enhancement Course(SEC)	Java Programming	25CSC403SE01	Compulsory	3
7	Ability Enhancement Course(AEC)	English-II	24ENGX03AE01	Compulsory	2

Scheme of Distribution of Marks:

Sr. No	Course Title	Course Code	Theory Marks		Practical Marks		Total Marks	Exam Time	Credit Distribution		
			Int.	Ext.	Int.	Ext.			L	T	P
1	Operating System	24BCA403DS01	30	70	0	0	100	3 hrs	4	0	0
2	Object Oriented Programming Using C++	24BCA403DS02	25	50	5	20	100	3 hrs	3	0	1
3	Database Management Systems	24BCA403DS03	25	50	5	20	100	3 hrs	3	0	1
4	Business Policy and Strategy	25IMS403MI01	70	30	---	---	100	3 hrs	4	0	0
	Molecular Structure, Thermodynamics, Equilibrium of alkyl halides	25CHE403MI01	15	35	15	35	100	3 hrs	4	0	0
	Statistical Inference	25STA403MI01	30	70	---	---	100	3 hrs	3	1	0
	Principles and applications of Agriculture Biotechnology,	25CBT403MI01	30	70	---	---	100	3 hrs	4	0	0
	Operation Research	25MAT403MI01	25	50	25	---	100	3 hrs	3	0	1
	Corporate Accounting	25COM403MI01	70	30	---	---	100	3 hrs	3	1	0
4	Basics of Home Science-III	25HSCX03MD03	15	35	5	20	75	3 hrs	2	0	1
	Essentials of Music Vocal	25MUSVX03MD01	---	---	---	---	75	3 hrs	2	0	1
	Music Instrumental	25MUSVX03MD01	---	---	---	---	75	3 hrs	2	0	1
	Foundation of Sociological Thought	25SOCX03MD03	---	---	---	---	75	3 hrs	2	0	1
	Corporate Governance	25COM403MD01	---	---	---	---	75	3 hrs	2	0	1
	Entrepreneurship & MSME	25IMSX03MD01	---	---	---	---	75	3 hrs	2	0	1
5	Java Programming	25CSC403SE01	---	---	---	---	75	3 hrs	1	0	2
6	English-II	24ENGX03AE01	---	---	---	---	50	3 hrs	2	0	0

Second Year Semester IV					
Sr.No	Courses	Course Title	Course Code	Remarks	Credits
1	Major 1	Computer System Architecture	24BCA404DS01	Compulsory	4
2	Major 2	Data Communication and Computer Networks	24BCA404DS02	Compulsory	4
3	Major 3	Java Programming	24BCA404DS03	Compulsory	4
4	Major 3	Computer Graphics	24BCA404DS04	Compulsory	4
3	Minor 1 in Commerce	Financial Engineering		Students must select one minor subject from the six options provided	4
	Minor 2 in Physical Science				
	Minor 3 in Statistics	Testing of Hypothesis using SPSS	25STA404MV01		
	Minor 4 in Life Science	Bio techniques	24CBT404MI01		
	Minor 5 in Mathematics	Mathematical Computing Using Python	25MAT404MV01		
	Minor 6 in Management	Database Management System	25IMS404MV01		
5	Value Added Course(VAC)	Communication Skill	23CLAEEC01	Compulsory	2
6	Ability Enhancement Course(AEC)	Hindi Bhasha Sanvardhan(Two)	24HNDX03AE01	Students must select one subject from the two options provided	2
		Sanskrit and Modern Indian Languages	24SKTX03AE01		

Scheme of Distribution of Marks:

Sr. No	Course Title	Course Code	Theory Marks		Practical Marks		Total Marks	Exam Time	Credit Distribution		
			Int.	Ext.	Int.	Ext.			L	T	P
1	Computer System Architecture	24BCA404DS01	30	70	0	0	100	3 hrs	4	0	0
2	Data Communication and Computer Networks	24BCA404DS02	30	70	0	0	100	3 hrs	4	0	0
3	Java Programming	24BCA404DS03	15	35	15	35	100	3 hrs	2	0	2
4	Computer Graphics	24BCA404DS04	25	50	5	20	100	3 hrs	3	0	1
5	Financial Engineering		70	30	---	---	100	3 hrs	4	0	0
			15	35	15	35	100	3 hrs	4	0	0
	Testing of Hypothesis using SPSS	25STA404MV01	30	70	---	---	100	3 hrs	3	1	0
	Bio techniques	24CBT404MI01	30	70	---	---	100	3 hrs	4	0	0
	Mathematical Computing Using Python	25MAT404MV01	25	50	25	---	100	3 hrs	3	0	1
	Database Management System	25IMS404MV01	50	---	50	---	100	3 hrs	3	0	1
6	Communication Skill(Value Added Course)	23CLAEEC01	---	---	---	---	50	3 hrs	0	0	2
7	Hindi Bhasha Sanvardhan-Two(AEC)	24HNDX03AE01	---	---	---	---	50	3 hrs	2	0	0
	Sanskrit and Modern Indian Languages(AEC)	24SKTX03AE01	---	---	---	---	50	2 hrs	2	0	0

Note: All Multidisciplinary Courses (MDC), Ability Enhancement Courses (AEC), Skill Enhancement Courses (SEC), and Value Added Courses (VAC) are evaluated through Formative Assessment in accordance with the prescribed university norms and guidelines.

Link: [Syllabi of UG and PG Programs revised in July 2025 - Google Drive](#)