BHARATI VIDYAPEETH

(Deemed to be University), Pune

'A+' Accreditation (Third Cycle) by 'NAAC' in 2017

Category-I Deemed to be University Graded by UGC

'A' Grade University Status by MHRD Govt. of India

Ranked 73rd by NIRF – 2022

FACULTY OF MANAGEMENT STUDIES

BACHELOR OF COMPUTER APPLICATION DEGREE

(THREE YEARS) / HONORS (FOUR YEARS)

FRAMED AS PER NATIONAL EDUCATION POLICY (NEP 2020)

SYLLABUS

Applicable with effect from 2022-23

Contents

Bharati Vidyapeeth (Deemed to be University), Pune
Faculty of Management Studies

Bachelor of Computer Application (Honors) FOUR YEARS

Revised Course Structure (To be effective from 2022-2023)

I. BCA (Honors) Four Years Programme :

The Bachelor of Computer Application (Honors) Programme is a full time four year programme offered by Bharati Vidyapeeth (Deemed to be University), Pune and conducted in Regular mode at its management institutes located in New Delhi, Pune, Navi Mumbai, Kolhapur, Sangli, Karad and Solapur. All the seven institutes have excellent faculty members, computer laboratories, Libraries, and other facilities to provide proper learning environment to the students. The University is accredited by NAAC with 'A+' grade. The expectations and requirements of the Software Industry, immediately and in the near future, are considered while designing the BCA programme. While designing the BCA Programme , the above facts are considered and the requirements for higher studies and immediate employment are visualized. This effort is reflected in the Vision and Mission statements of the BCA programme, the statements also embody the spirit of the vision of Dr. Patangraoji Kadam, the Founder of Bharati Vidyapeeth ― "Social Transformation Through Dynamic Education"

II. Vision:

Preparing the Students to cope with the rigor of Post Graduate Programmes in global and creating high caliber solution architects for software development, who will also be sensitive to societal concerns.

III. Mission:

- We aim to drive transformation, technology and innovation through problem solving approach and research development.
- We aim to provide students with the IT tools to become productive and lifelong learner.

IV. Aims:

- To impart quality computer education to enhance logical computing and programming skills.
- To implement innovative techniques and process in leading-learning and evaluation.
- To further creativity and pursuit of excellence in computer applications.

V. Learning Outcome Based Curriculum Framework -

1. Programme Education Objectives:

The Bachelor of Computer Application (Honors) Four Years degree programme has the following objectives…

I. To prepare the youth to take up positions as system analysts, system engineers, software engineers and programmers.

II. To aim at developing 'systems thinking' 'abstract thinking', 'skills to analyze and synthesize', and 'skills to apply knowledge', through 'extensive problem solving sessions', 'hands on practice under various hardware/software environments' and' projects developed'.

III. To prepare students with 'social interaction skills', 'communication skills', 'life skills', 'entrepreneurial skills', and 'research skills' which are necessary for career growth and for leading quality life are also imparted.

2. Programmme Outcomes (POs) :

On completion of BCA (Honors) Four Year Degree Programme the expected programme outcomes that a student should be able to demonstrate are the following:

PO1. Computational Knowledge: Understand and apply mathematical foundation, computing and domain knowledge for the conceptualization of computing models from defined problems.

PO2. Problem Analysis: Ability to identify, critically analyze and formulate complex computing problems using fundamentals of computer science and application domains.

PO3. Design / Development of Solutions: Ability to transform complex business scenarios and contemporary issues into problems, investigate, understand and propose integrated solutions using emerging technologies.

PO4. Conduct Investigations of Complex Computing Problems: Ability to devise and conduct experiments, interpret data and provide well informed conclusions.

PO5. Modern Tool Usage: Ability to select modern computing tools, skills and techniques necessary for innovative software solutions

PO6. Professional Ethics: Ability to apply and commit professional ethics and cyber regulations in a global economic environment.

PO7. Life-long Learning: Recognize the need for and develop the ability to engage in continuous learning as a Computing professional.

PO8. Project Management: Ability to understand management and computing principles with computing knowledge to manage projects in multidisciplinary environments.

PO9. Communication Efficacy: Communicate effectively with the computing community as well as society by being able to comprehend effective documentations and presentations.

PO10. Societal & Environmental Concern: Ability to recognize economical, environmental, social, health, legal, ethical issues involved in the use of computer technology and other consequential responsibilities relevant to professional practice.

PO11. Individual & Team Work: Ability to work as a member or leader in diverse teams in multidisciplinary environment.

PO12. Innovation and Entrepreneurship: Identify opportunities, entrepreneurship vision and use of innovative ideas to create value and wealth for the betterment of the individual and society.

3. Programmme Specific Outcomes (PSOs) :

After the completion of the course, a student is able to

PSO1: Ability to learn the various programming languages with database concepts along with development environment

PSO2 : Ability to apply theoretical and practical knowledge to solve business problems through data communication technology concepts.

PSO3 : Flourish the innovation and research attitude to develop IT artifact.

PSO4: Foster analytical and critical thinking abilities for efficient programming

PSO5: Demonstrate and apply the programming knowledge to develop effective software solution.

PSO6: Enrich the knowledge in the areas of Advanced technologies and business practices.

PSO7: Maintain the personality with environmental and social concerns

4. Graduate Attributes:

After completing BCA (Honors) Four Year Degree programme the students will be able to acquire following attributes and skills to groom the overall personality.

- **Knowledge of Discipline of Computer Science**: This Graduate will be capable of demonstrating comprehensive and considered knowledge of a discipline. Student enables to evaluate and utilize information and apply their knowledge and professional skills in the field of IT.
- **Creativity**: Graduates will be trained to develop skills needed for creativity to design and implement computer application software. Also able to think and imagine IT solution for real life problems / applications.
- **Intellectual Rigour**: The graduates are expected to have clarity in thinking. Graduates will be involved to develop constructively and methodically, exploring ideas, theories and philosophies. It also relates to the ability to analyse and construct knowledge with depth, insight and intellectual maturity.
- **Problem Solving and Design**: Graduate empower not only within the context of their programmes, but also in their personal and professional lives. Graduate should have ability to identify problems, think creatively to find alternative solutions and evaluate those for selecting effective algorithm to solve the problem efficiently.
- **Ethical Practices**: Graduate should adopt tolerance, responsibility, open-mindedness about cultural diversity, linguistic difference, and the complex nature of our world. Graduate should behave appropriately towards colleagues and the community and being sensitive to local and global social justice issues
- **Communication and Social Skills**: Graduate have the ability to communicate clearly and to work well in a team setting is critical to sustained and successful employment. Good communication and social skills involve the ability to listen to, as well as clearly express information back to others in a variety of ways - oral, written, and visual - using a range of technologies.
- **Life-Long Learning**: Graduate is having open, curious, willing to investigate, and consider new knowledge and ways of thinking. He / She should able to adopt and grasp the new upcoming technologies in IT sector.
- **Self-Management**: Graduates must have capabilities for self-organisation, self-review, personal development and lifelong learning.
- **Critical thinker and problem solver**: Ability to employ critical thinking and efficient problem solving skills for different kinds of problem related to computer science
- **Team player/worker**: Capable of working effectively in diverse teams in both classroom, laboratory, in industry and project-based situations.

VI. Duration:

The duration of the BCA Bachelor's degree Program having six semesters and BCA (Honors) Degree Program is of four years spread across Eight Semesters with multiple entry and exit options. Student should complete the 4 years degree programme within 7 years.

a) Following EXIT options are available with the students:

Exit Option	**Minimum Credits Requirements**	**NSQF Level**	**Bridge course**
Under graduate Certificate - After successful completion of First Year	40	5	10 credits bridge course(s) lasting two months including at least 06 credits job specific internship that would help the learner to acquire job ready competencies to enter the workforce.
Under graduate Diploma - After successful completion of Second Year	80	6	
Bachelor's Degree - After successful completion of Third Year	120	7	
Bachelor's Degree with Honors- After successful completion of Fourth Year OR **Bachelor's Degree with Honors (Research) -** After successful completion of Fourth Year	160	8	

Note : Student is free to complete some interdisciplinary courses from other institutes provided he/she should earn 50% required credits from home HEI.

Student should complete the core disciplinary courses from home University (HEI) to get exit option for UG certificate/ UG diploma/ Bachelor Degree.

b) Following Entry options are available with the students :

- Student who opt Exit option at the end of 1st / 2nd /3rd year, can reenter the same programme within three years from Exit.
- Student with Bachelors Degree can opt for Bachelor degree with Honors
- Student with Bachelors Degree can opt for Bachelor degree with Honors (Research) if the student secure CGPA >= 7.5

National Skills Qualifications Framework (NSQF) Levels :

Option	NSQF Level	Professional Knowledge	Skill
At the end of first year	**5**	Knowledge of facts, principles, processes, concepts in a field of work or study	The student will have fundamental knowledge of computation, problem solving ability and basic website designing ability.
At the end of Second year	**6**	Factual and theoretical knowledge in the broad context within a field of work or study	Additionally the student will have advanced programming skills along with system development ability
At the end of Third year	**7**	Wide ranging factual and theoretical knowledge in the broad context within a field of work or study	Additionally, student will have skills of Web Application development with Technical Writing and Report Generation.
At the end of Fourth year	**8**	Comprehensive, cognitive theoretical knowledge and practical skills to develop creative solutions to abstract problem	Additionally, student will have skills of solving business application applying advanced technology

VII.Academic Bank Of Credits (ABC) :

As per the National Educational Policy (NEP) 2020, the Academic Bank of Credit offer the flexibility of curriculum framework and interdisciplinary /multidisciplinary academic mobility of students across Higher Educational Institutes (HEIs) with appropriate credit transfer mechanism. In furtherance to these guidelines the Faculty of Management Studies, Bharati Vidyapeeth (Deemed to be University) Pune has designed a four years undergraduate program offered at its constituent units.

As a pre-requisite a student should register in the Bharati Vidyapeeth (Deemed to be University) Academic Bank of Credit. The credits earned by the student/learner will be stored in it. A Student/learner would be required to complete the course as per the ABC (Academic Bank Credit) policy of UGC. The validity of the credits earned for a course is seven years only.

VIII. Eligibility Criteria for admission:

A candidate applying for BCA(Honors) Four years programme should have passed higher secondary (10 + 2) or equivalent examination (10+3) of any recognized Board with satisfying the conditions to pass a common All India Entrance test (BU-MAT) conducted by Bharati Vidyapeeth (Deemed to be University), Pune. The final admission is based solely on the merit at the BU-MAT test.

IX. Grading System for Programmes under Management Studies:

- **Grade Points** : The Faculty of Management Studies, Bharati Vidyapeeth (Deemed to be University) has suggested 10-point grading system for all programmes designed by its various Board of Studies. A grading system is a 10-point system if the maximum grade point is 10. The system is given in Table Ibelow.

Table I: The 10-point Grading System Adapted for Programmes under FMS

Range of Percent Marks	[80,100]	[70,79]	[60,69]	[55,59]	[50,54]	[40,49]	[00,39]
Grade Point	10.0	9.0	8.0	7.0	6.0	5.0	0.0
Grade	**O**	**A+**	**A**	**B+**	**B**	**C**	**D**

Formula to calculate GP is as under:

Set x = Max/10 where Max is the maximum marks assigned for the examination (i.e. 100)

Formula to calculate the individual evaluation

Range of Marks	Formula for the Grade Point
$8x \leq Marks \leq 10x$	10
$5.5x \leq Marks \leq 8x$	Truncate (M/x) +2
$4x \leq Marks \leq 5.5x$	Truncate (M/x) +1

- **Scheme of Examination**

Courses having Internal Assessment (IA) and University Examinations (UE)shall be evaluated by the respective constituent units and the University at the term end for **40** and **60** Marks respectively. The total marks of IA and UE shall be 100 Marks and it will be converted into grade points and grades.

For Internal Assessment (IA) the subject teacher may use the following assessment tools:

a) Attendance

b) *Class Tests*

c) *Presentations*

d) *Class Assignments*

e) Case studies

f) *Practical Assignments*

g) *Mini Projects*

h) *Oral*

i) ***MOOCs*** **-** The Bharati Vidyapeeth (Deemed to be University), Pune offering MOOCS (Massive Open Online Courses Subjects) so as to provide wide access to online learning. The student will complete MOOCS courses as a part of Continuous Evaluation System (CES)

X. Standard of Passing:

For all courses, both UE and IA constitute separate heads of passing. In order to pass in such courses and to earn the assigned credits, the student/learner must obtain a minimum grade point of 5.0 (40% marks) at UE and also a minimum grade point of 5.0 (40% marks) at IA.

If Student fails in IA, the learner passes in the course provided, he/she obtains a minimum 25% marks inIA and GPA for the course is at least 6.0 (50% in aggregate). The GPA for a course will be calculated only if the learner passes at UE.

A student who fails at UE in a course has to reappear only at UE as backlog candidate and clear the Headof Passing. Similarly, a student who fails in a course at IA he has to reappear only at IA as backlog candidate and clear the Head of Passing to secure the GPA required for passing.

The 10 point Grades and Grade Points according to the following table

Range of Marks (%)	Grade	Grade Point
80≤Marks≤100	O	10
70≤Marks<80	A+	9
60≤Marks<70	A	8
55≤Marks<60	B+	7
50≤Marks<55	B	6
40≤Marks<50	C	5
Marks < 40	D	0

The performance at UE and IA will be combined to obtain GPA (Grade Point Average) for the course.The weights for performance at UE and IA shall be 60% and 40% respectively.

GPA is calculated by adding the UE marks out of 60 and IA marks out of 40. The total marks out of 100 are converted to grade point, which will be the GPA.

Formula to calculate Grade Points (GP)

Suppose that "Max" is the maximum marks assigned for an examination or evaluation, based on which GP will be computed. In order to determine the GP, Set x = Max/10 (since we have adopted 10 point system). Then GP is calculated by the following formulas

Range of Marks	Formula for the Grade Point
8x ≤ Marks≤10x	10
5.5x ≤ Marks<8x	Truncate (M/x) +2
4x ≤ Marks<5.5x	Truncate (M/x) +1

Two kinds of performance indicators, namely the Semester Grade Point Average (SGPA) and the Cumulative Grade Point Average (CGPA) shall be computed at the end of each term. The SGPA measures the cumulative performance of a learner in all the courses in a particular semester, while the CGPA measures the cumulative performance in all the courses since his/her enrolment. The CGPA of learner when he /she completes the programme is the final result of the learner.

The SGPA is calculated by the formula

$$SGPA = \frac{\sum Ck * GPk}{\sum Ck}$$

where, Ck is the Credit value assigned to a course and GPk is the GPA obtained by the learner in the course. In the above, the sum is taken over all the courses that the learner has undertaken for the study during the Semester, including those in which he/she might have failed or those for which he/she remained absent. **The SGPA shall be calculated up to two decimal place accuracy.**

The CGPA is calculated by the following formula

$$CGPA = \frac{\Sigma C_k * GP_k}{\Sigma C_k}$$

where, Ck is the Credit value assigned to a course and GPk is the GPA obtained by the learner in the course. In the above, the sum is taken over all the courses that the learner has undertaken for the study from the time of his/her enrolment and also during the semester for which CGPA is calculated.

The CGPA shall be calculated up to two decimal place accuracy.

The formula to compute equivalent percentage marks for specified CGPA:

% marks (CGPA)	10 * CGPA-10	If 5.00 ≤ CGPA < 6.00
	5 * CGPA+20	If 6.00 ≤ CGPA < 8.00
	10 * CGPA-20	If 8.00 ≤ CGPA < 9.00
	20 * CGPA-110	If 9.00 ≤ CGPA < 9.50
	40 * CGPA-300	If 9.50 ≤ CGPA ≤ 10.00

XI. Award of Honours:

A student who has completed the minimum credits specified for the programme shall be declared to have passed in the programme. The final result will be in terms of letter grade only and is based on the CGPA of all courses studied and passed. The criteria for the award of honours are given below.

Range of CGPA	Final Grade	Performance Descriptor	Equivalent Range of Marks (%)
9.5≤CGPA ≤10	O	Outstanding	80≤Marks≤100
9.0≤CGPA ≤9.49	A+	Excellent	70≤Marks<80
8.0≤CGPA ≤8.99	A	Very Good	60≤Marks<70
7.0≤CGPA ≤7.99	B+	Good	55≤Marks<60
6.0≤CGPA ≤6.99	B	Average	50≤Marks<55
5.0≤CGPA ≤5.99	C	Satisfactory	40≤Marks<50
CGPA below 5.0	F	Fail	Marks below 40

XII. Rules of ATKT:

a) For admission to Semester V of BCA Third year, Students/Learners should pass all the courses under Sem I and II.

ii) For admission to Semester VII of BCA Fourth year, Students/Learners should pass all the courses under Sem I, II ,III and IV.

XIII. INTERNSHIP:

At the end of Semester VI, each student shall undertake Internship in an Industry for 50 (Fifty Days). It is mandatory for the students to seek written approval from the Faculty Guide about the Topic & the Organisation before commencing the Internship.

During the Internship students are expected to take necessary guidance from the faculty guide allotted by the Institute. To do it effectively they should be in touch with their guide through e-mail or telecom. Internship Project should be a Computer Application to Real life business activity.

The learning outcomes and the utility to the organization must be highlighted in Internship Project Report.

General chapterization of the report shall be as under:

1) Introduction
2) Theoretical background
3) Company profile
4) Objectives of the study
5) System Requirements
6) System Analysis & Design
7) Implementation & Testing
8) Conclusion & Suggestions

References:

Annexure: -

TECHNICAL DETAILS:

1. The report shall be printed on A-4 size white bond paper.
2. 12 pt. Times New Roman font shall be used with 1.5 line spacing for typing the report.
3. 1" margin shall be left from all the sides.
4. Considering the environmental issues, students are encouraged to print on both sides of the paper.
5. The report shall be hard bound as per the standard format of the cover page given by the Institute and shall be golden embossed.
6. The report should include a Certificate (on company's letter head) from the company duly signed by the competent authority with the stamp.
7. The report shall be signed by the respective guide(s) & the Director of the Institute 10 (Ten) days before the viva-voce examinations.
8. Student should prepare two hard bound copies of the Summer Internship Project Report and submit one copy in the institute. The other copy of the report is to be kept by the student for their record and future references.
9. In addition to this students should prepare two soft copies of their Summer IP reports & submit one each in Training & Placement Department of the Institute & Library

The Internship shall be assessed out 200 Marks. The breakup of these marks is as under;

Viva- voce examination = 120 (One Hundred Twenty) Marks
Internship Report = + 80 (Eighty) Marks
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200 (Two Hundred) Marks

The examiners' panel shall be decided as per the guidelines received from the University.

The viva –voce shall evaluate the project based on

i. Actual work done by the student in the organization
ii. Student's knowledge about the company & Business Environment
iii. Learning outcomes for the student

iv. Utility of the study to the organization

XIV. Specializations:

BCA three year degree programme and BCA(Hons.) four year degree programme 2022 offers specialization to the students/learners in the third year of both the programmes. The students/learner are required to select any one specialization from the list provided below.

Sr. No.	Specialization Course	Course No	Course Name
01	**Data analysis**	505-1-A	Data analysis using Excel
		605-1-B	R Programming
02	**Information Security**	505-2-A	Information Security Concepts
		605-2-B	Information Security Administration
03	**Big Data**	505-3-A	Introduction to Big Data
		605-3-B	HADOOP
04	**Information Systems**	505-4-A	E-Commerce
		605-4-B	Knowledge Management

Prerequisite for offering the specialization –

- There must be minimum 10 (Ten) students for a particular specialization.

XV. Course Structure:

SEMESTER I

Course Number	Course Title	Course Type	Credits	Hours / Week			IA	UE	Total Marks
				L	**T**	**P**			
101	Fundamentals of Information Technology	DSC	3	3	1	-	40	60	100
102	C Programming	DSC	3	3	1	-	40	60	100
103	Organization of IT Business	MDC	3	3	1	-	40	60	100
104	Discrete Mathematics	MDC	3	3	1	-	40	60	100
105	Lab on MS-Office Suite	DSC	2	-	-	4	40	60	100
106	Lab on C Programming	DSC	2	-	-	4	40	60	100
107	Human Universal Values	VBC	2	2	-		50	-	50
108	Language – I	AEC	2	2	-	-	50	-	50
Total			**20**	**16**	**4**	**8**	**340**	**360**	**700**

SEMESTER II

Course Number	Course Title	Course Type	Credits	Hours / Week			IA	UE	Total
				L	T	P			
201	Web Development Technology	DSC	3	3	1	-	40	60	100
202	DBMS I	DSC	3	3	1	-	40	60	100
203	Data Structures using C	DSC	3	3	1	-	40	60	100
204	Financial Accounting	MDC	3	3	1	-	40	60	100
205	Lab on Data Structures using C	DSC	2	-	-	4	40	60	100
206	Lab on Web Development Technology	DSC	2			4	40	60	100
207	Environmental Studies	VBC	2	2	-	-	50	-	50
208	Community Work (Swaccha Bharat Abhiyan)	VBC	2	2	-	-	50	-	50
Total			**20**	**16**	**4**	**8**	**340**	**360**	**700**

SEMESTER III

Course Number	Course Title	Course Type	Credits	Hours / Week			IA	UE	Total
				L	T	P			
301	Operating Systems	DSC	3	3	1	-	40	60	100
302	Software Engineering	DSC	3	3	1	-	40	60	100
303	Java Programming	DSC	3	3	1	-	40	60	100
304	Statistics	MDC	3	3	1	-	40	60	100
305	Lab on Oracle	DSC	2	-	-	4	40	60	100
306	Lab on Java	DSC	2	-	-	4	40	60	100
307	Start-up Management	AEC	2	2	-	-	50	-	50
308	Yoga & Meditation	VBC	2	2	-	-	50	-	50
Total			**20**	**16**	**4**	**8**	**340**	**360**	**700**

SEMESTER IV

Course Number	Course Title	Course Type	Credits	Hours / Week			IA	UE	Total
				L	T	P			
401	Computer Networks	DSC	3	3	1	-	40	60	100
402	Advanced JAVA	DSC	3	3	1	-	40	60	100
403	Advanced HTML with Javascript and CSS	DSC	3	3	1	-	40	60	100
404	Optimization Techniques	MDC	3	3	1	-	40	60	100
405	Lab on JAVA	DSC	2	-	-	4	40	60	100
406	Lab on HTML, Javascript and CSS & Minor Project - I	DSC	2	-	-	4	40	60	100
407	Cyber security	SEC	2	2	-	-	50	-	50
408	Mathematical Aptitude	AEC	2	2	-	-	50	-	50
Total			**20**	**16**	**4**	**8**	**340**	**360**	**700**

SEMESTER V

Course Number	Course Title	Course Type	Credits	Hours / Week			IA	UE	Total
				L	T	P			
501	Basic Python Programming	DSC	3	3	1	-	40	60	100
502	Dot Net programming using C#	DSC	3	3	1	-	40	60	100
503	Entrepreneurship Development	MDC	3	3	1	-	40	60	100
504	Elective I	DSE	3	3	1	-	40	60	100
505	Lab on Python	DSC	2	-	-	4	40	60	100
506	Lab on Dot Net and C#	DSC	2	-	-	4	40	60	100
507	IT based Aptitude	AEC	2	2	-	-	50	-	50
508	Human Rights	VBC	2	2	-	-	50	-	50
Total			**20**	**16**	**4**	**8**	**340**	**360**	**700**

SEMESTER VI

Course Number	Course Title	Course Type	Credits	Hours / Week			IA	UE	Total
				L	T	P			
601	Data warehousing and Data Mining	DSC	3	3	1	-	40	60	100
602	Web Programming (PHP)	DSC	3	3	1	-	40	60	100
603	Software Project Management	DSC	3	3	1	-	40	60	100
604	Elective II	DSE	3	3	1	-	40	60	100
605	Lab on Web programming with Project	DSC	2	-	-	4	40	60	100
606	Lab on Data Visualization	DSC	2	-	-	4	40	60	100
607	Digital marketing	SEC	2	2	-	-	50	-	50
608	Indian Culture	VBC	2	2	-	-	50	-	50
Total			**20**	**16**	**4**	**8**	**340**	**360**	**700**

SEMESTER VII

Course Number	Course Title	Course Type	Credits	Hours / Week			IA	UE	Total
				L	T	P			
701	Cloud Computing	DSC	3	3	1	-	40	60	100
702	Mobile Application Development	DSC	3	3	1	-	40	60	100
703	Internet of Things	DSC	3	3	1	-	40	60	100
704	Object Oriented Analysis and Design	DSC	3	3	1	-	40	60	100
705	Research Methodology	DSC	3	3	1	-	40	60	100
706	Lab on IOT	DSC	2	-	-	4	40	60	100
707	Lab on Mobile Application Development	DSC	2	-	-	4	40	60	100
708	Technical Writing	SEC	1	2	-	-	50	-	50
Total			**20**	**17**	**5**	**8**	**330**	**420**	**750**

SEMESTER VIII

Course Number	Course Title	Course Type	Credits	Hours / Week			IA	UE	Total
				L	T	P			
801	Introduction to AI and ML	DSC	3	3	1	-	40	60	100
802	ERP	DSC	3	3	1		40	60	100
803	Block Chain Technology	DSC	3	3	1	-	40	60	100
804	Internship Project	SEC	6	-	-	8	80	120	200
805	Professional Ethics	MDC	3	3			40	60	100
806	Organisational Behaviour	VBC	1	2			50		50
807	IPR	AEC	1	2			50		50
Total			**20**	13	-	8	**340**	**360**	**700**

Fourth year of BCA Honors Programme with Research

SEMESTER VII

Course Number	Course Title	Course Type	Credits	Hours / Week			IA	UE	Total
				L	T	P			
701	Cloud Computing	DSC	3	3	1	-	40	60	100
702	Mobile Application Development	DSC	3	3	1	-	40	60	100
703	Internet of Things	DSC	3	3	1	-	40	60	100
704	Object Oriented Analysis and Design	DSC	3	3	1	-	40	60	100
705	Research Methodology	DSC	3	3	1	-	40	60	100
706	Lab on IOT	DSC	2	-	-	4	40	60	100
707	Lab on Mobile Application Development	DSC	2	-	-	4	40	60	100
708	Technical Writing	SEC	1	2	-	-	50	-	50
Total			**20**	**17**	**5**	**8**	**330**	**420**	**750**

SEMESTER VIII

Course Number	Course Title	Course Type	Credits	Hours / Week			IA	UE	Total
				L	**T**	**P**			
801	Dissertation	DSC	12				100	300	400
802	Seminar on Recent Trends In Computer Science and Information Technology : Literature Review	DSC	3				100		100
803	Professional Ethics	MDC	3	3			40	60	100
804	Organisational Behaviour	VBC	1	2			50	-	50
805	IPR	AEC	1	2			50	-	50
Total			**20**	13	-	8	**340**	**360**	**700**

Abbreviations Expanded

- **DSC** - Discipline Specific Course
- **DSE** - Discipline Specific Elective
- **MDC** – Minor Disciplinary Course
- **SEC** - Skill Enhancement Course
- **VBC** - Value Based Course
- **AEC** - Ability Enhancement Course

XVI. Question Paper Patterns for University Examination:

*The pattern of **question paper** for the courses having University Examinations will be as follows:*

Title of the Course

Day: **Total Marks: 100**

Date: **Time: 03 Hours**

Instructions:

a. Attempt any FIVE questions from Section I Each question carries 12 Marks.
b. Attempt any TWO questions from Section II Each question carries 20 Marks.

SECTION – I	
It should contain 07 questions covering the syllabus & should test the conceptual knowledge of the students	
Question	**Marks**
Q.1 ……	(12 marks)
Q.2 ……	(12 marks)
Q.3 ……	(12 marks)
Q.4 ……	(12 marks)
Q.5 ……	(12 marks)
Q.6 ……	(12 marks)
Q.7 Write **Short Notes** on ANY TWO	(12 marks)
SECTION – II	
It should contain 03 questions covering the entire syllabus & should be based on application of the Concepts	
Q.8……..	(20 marks)
Q.9……	(20 marks)
Q.10……..	(20 marks)

***Note : 100 marks will be converted to 60 as per BVDU, Pune Examination Section Scaling down**

Programme: BCA CBCS– Revised Syllabus w.e.f.-Year2022 –2023			
Semester	**Course Code**	**Course Title**	
I	**101**	**Fundamental of IT**	
Type	**Credits**	**Evaluation**	**Marks**
Discipline Specific Course	3	IE 40 + UA(60)	100

Course Objectives:

To make students to:

- Get familiar with Computer and its components.
- Introduce various devices
- Handle MS-Office package to apply for technical and professional careers.

Course Outcomes:

After completing the course the students shall be able to

- Understand basic concepts and types of Computer, memory devices and software
- Remember types of computer and its peripherals
- Demonstrating MS-office tools for data processing, mathematical operations in worksheets, presentations.
- Analyse the use of various components of computer

Unit	Sub Unit	Competency	Competency Indicators	Sessions
Introduction to Computer	• Computer-Definition, Characteristics, Concept of Hardware, Software , Evolution of computer and Generations • Types of Computer – Analog and Digital computers, Hybrid Computers, General Purpose and Special Purpose Computer • Limitations of Computer, Applications of Computer in Various Fields.	Have a basic understanding of personal computers and their operations.	Understand and remembering Computer S/W, H/W and its generation, types of computers.	9
I/O Devices	• Input Device – Keyboard, Mouse, Scanner, MICR, OMR.	Understand basic concepts and terminology of	In detail analyze I/O devices and it's operations.	8

	• Output Devices – VDU, Printers – Dot Matrix, Daisy-wheel, Inkjet, Laser, Line Printers and Plotters.	information technology.		
Computer Memory	• Memory Concept, Memory Cell, Memory Organisation, Semiconductor Memory – RAM, ROM, PROM, EPROM • Secondary Storage Devices – Magnetic Tape, Magnetic Disk (Floppy Disk and Hard Disk.), Compact Disk.	Identify common computer hardware and software elements and understand how they interact with each other	Use of primary and secondary Memory	8
Softwares	• Software and its needs, Types of S/W. System Software: Operating System, Utility Programs Programming Language: Machine Language, Assembly Language, High Level Language their advantages & disadvantages. • Application S/W and its types: Word Processing, Spread Sheets Presentation, Graphics, DBMS s/w • Concept of Network and its Type, Basic Elements of a Communication System, Data Transmission Media, Topologies	Software and its needs, Operating System, Utility Programs and Programming Languages	Awareness of basic languages databases, networks with in computer systems.	8
MS-office	• **MS Office:** Introductio n to MS Office, Components and Features. • **MS Word:** Creating Letter, Table,	Demonstrate how to MS-Office software tools for word processing, mathematical processing and presentations.	Developing skill of preparing documents, presentation and storing of simple data in databases.	12

	Fonts, Page Layout Document, Formatting, Spell Check, Print Preview, Template, Color, Mail Merge, Auto Text, Inserting Picture, Word Art. • **MS Excel:** Introduction to Excel, Sorting, Queries, Graphs, Scientific Functions. • **PowerPoint:** Introduction to PowerPoint, Creation of Slides, Inserting Pictures, Preparing Slide Show with Animation. • **MS Access:** Creation and Manipulation of Files.			

Reference Books:

Sr.No.	Name of the Author	Title of the Book	Year Edition	Publisher Company
1	P.K.Sinha	Computer Fundamentals	2015 (6th Edition)	BPB Publication
2	**V.**Rajaraman	Fundamentals of Computers	2001(3rd Edition)	PHI Publication
3	Vishnu Singh	Quick Reference for MS-Office 2007	2008	Asian Publisher

Online Resources:

Online Resources No.	Web site address
1	https://www.udemy.com/course/fundamentals-of-information-technology/
2	https://www.youtube.com/watch?v=DLb8IFee-DI
3	https://www.youtube.com/watch?v=mOYpH24GR6Y
4	https://www.youtube.com/watch?v=j8hVRx2AFP0

MOOCs:

Resources No.	Web site address
1	https://www.classcentral.com/course/swayam-introductory-concepts-of-digital-computing-45159
2	https://www.classcentral.com/course/swayam-sr-secondary-computer-science-330-17803
3	https://www.classcentral.com/course/edx-information-technology-foundations-17970

Programme: BCA CBCS– Revised Syllabus w.e.f.-Year 2022 –2023			
Semester	**Course Code**	**Course Title**	
I	**102**	**C Programming**	
Type of Course	**Credits**	**Evaluation**	**Marks**
Discipline Specific Course	**3**	UE(60)+IE(40)	100

Course Objectives:

Objectives :

- To learn Procedure Oriented Programming Language C.
- Emphasise on process of learning a computer language.
- Focus on semantics and problem solving.

Course Outcomes:

After completing the course the students shall be able to

- Solve a given problem using procedural technique.
- Understand and use control statements and operators.
- Read, understand and design C programs using control structures.
- Effectively use of Arrays and functions implement pointers and its arithmetic
- Apply C programing concepts for solving simple real life problems.

Unit	Sub Unit	Competency	Competency Indicators	Sessions
Introduction to Algorithm	• Concept, of Problem, Procedure and Algorithm • Algorithm Representation through Pseudo -Code and Flow - Charts • Tracing of Algorithms Such as Swapping, Counting, Finding the Sum, Product, maximum, minimum, of a list of numbers.	Argue the correctness of algorithms using inductive proofs and invariants.	Understand and remembering Algorithm. Tracing of Algorithms.	5
Introduction to C Language	• History • Structure of C Programming, Function as building blocks	Defining keywords, identifiers,	Understand the basics of C Programming	5

	• Language Fundamentals, Character set, C Tokens, Keywords, Identifiers, Variables, Constant, • Data Types, Comments	variables, constants in C		
Operators	• Types of operators, Operator Precedence and Associativity • Expression, Statement and types of statements • Built in Operators and functions • Console based I/O and related built in I/O function- printf(), scanf(), getch(), getchar(), putchar(), • Concept of header files, Preprocessor directives - #include, #define	Learn Operator set, statement types, input and output statement	Understanding of input output statements and write simple programs	6
Control Structures	• Basic Control Structures • Decision making structures - if statement, if-else statement, Nested if-else statement, switch statement • Loop Control structures - while loop, do-while loop, for loop, Nested for loop • Other statements - break keyword, continue keyword, goto keyword, exit function	Use of decision making and looping statements for program writing	Program writing using decision making and looping statements	8
Functions and Arrays	• Introduction • Purpose of function, Function declaration/ Function prototype, Functiondefinition,Functioncall,returnstatement • Functionparameters • Typesoffunctions • Callbyvalue • Storageclasses • Recursion,Examples on recursive function • Introduction to one-dimensional Array, Definition, Declaration, Initialization, Accessingand displaying array elements • Arrays and functions • Introduction to two-dimensionalArray, Definition, Declaration, Initialization, Accessing and displaying array elements	Concept of Function, Array and its type	Understanding of use of function and array and implement it to understand the functionalities of same	13

Strings, Structure and Pointers	• Introductions to Strings, Definition, Declaration, Initialization • Input, output statements for strings • Standard String library functions with example • Structure – User defined datatypes, Concept of structure, Union; Member access operator • Introduction to pointer, Definition, Declaring and Initializing pointer variable • Indirection operator and address of operator, Accessing variable through its pointer, Pointer arithmetic • Dynamic memory allocation	String and its manipulation functions User defined data types i.e. Structure and Union	Writing C Program for string handling and use of Structure and Union	8

Reference Books:

Sr.No.	Name of the Author	Title of the Book	Year Edition	Publisher Company
1	Yashwant Kanetkar	Let us C	2018	BPBPublications
2	B.W.Kernighan, D.M.Ritchie	The‘C’programming language	1998	PHI
3	Balaguruswami	Programming inANSIC	2019	TMH

MOOCs:

Resources No.	Website address
1	NPTEL / Swayam
2	www.edx.com
3	www.coursera.com

Programme:BCA CBCS – Revised Syllabus w.e.f. - Year 2022 – 2023			
Semester	**Course Code**	**Course Title**	
I	**103**	**Organization of IT Business**	
Type of Course	**Credits**	**Evaluation**	**Marks**
Discipline Specific Course	3	UE(60)+IE(40)	100

Course Objectives :

To acquaint students with fundamentals of Business Organization and management systems as abody of knowledge.

Course Outcomes:

- To know about business and its structure and its various forms.
- To Apply and enlighten with nature and scope of IT business organization.
- To make them understand the office function and its significance on office layout
- To understand the complexities associated with management of human resources in the IT organizations and integrate the learning in handling these complexities.

Unit	Sub Unit	Competency	Competency Indicators	Sessions
Nature and Evolution of Business	Concept of Business – Meaning, Definition, Nature and Scope, Characteristics ofBusiness. Business as an Economic Activity. Objectives of Business. Structure of Business (Classification of Business Activities. Requisites for Success in ModernBusiness. Beginning and development of Commerce, Evolution of Industry, Industrial Revolution, Beginning and growth of Indian Business, Industrialization in India	Basics of Business	Studying Basics of Business Structure	10
Forms of Business Ownership	Introduction to various forms – Factors affecting choices of an deal form of ownership, features Merits and Demerits of Sole Proprietorship – Joint Hindu FamilyBusiness – Partnership – Joint Stock Company – Co-operative Organization, Public Enterprises.	Different types of business	Study each business type with is merits and demerit	10
Formation of a Company	Stages in formation and incorporation of a company (e Promotion – incorporation and registration – Capital	Documentation for company formation	Study different documents required to operate business	10

	Subscription - Commencement of Business. - Documents of a Company i.e. Memorandum of Association – Articles of Association – Prospectus.			
The Impact of information technology on the Business	Modern Organizations- IT runs the Airlines, Technology Transforms, Securities Industry, Creating New Types of Organization- Examples of Designs using IT Variables, Adding peoples to the design.	Use of IT in Organization	Study the application of IT in Business Process	10
Strategic Issues of Information Technology	IT and Corporate Strategy- Some examples of Technology strategy, value chain, A framework for the strategic use of IT. Creating and sustaining a Competitive edge- Using resource to advantage, protecting an IT innovation. Integrating Technology with the Business Environment.	Corporate Strategy for running Business with IT	Different Corporate Strategy for Business using IT	5

Reference Books:

Sr. No.	Name of the Author	Title of the Book	Year Edition	Publisher Company
1	S.A. Sherlekar	Modern Business Organization and Management	latest edition	Himalaya Publishing House)
2	Y.K. Bhushan	Fundamental of Business Organization & Managemen	latest edition	S Chand Publishers
3	C. R. Basu	Business Organization and Management	1998	Tata McGraw Hill
4	Henry C. Lucas,Jr	Information Technology for Management	latest edition	Tata McGraw Hill
5	S.S. Dubey	IT Services Business Management: Concepts, Processes and Practices	latest edition	PHI Publication

MOOCs:

ResourcesNo.	Web site address

1	NPTEL
2	Swayam
3	www.edx.com
4	www.coursera.com

Programme: BCA CBCS – Revised Syllabus w.e.f. - Year 2022 – 2023			
Semester	**Course Code**	**Course Title**	
I	**104**	**Discrete Mathematics**	
Type of Course	**Credits**	**Evaluation**	**Marks**
Minor Disciplinary Course	3	UE(60)+IE(40)	100

Course Objectives :

To make students to :

- Get familiar with discrete structures of mathematics and its application in Business.
- Model the given data in set structure also Set relation among data descriptors.
- Define the function and identify the types of function
- Represent the facts in logic statements and resolve the given problem

Course Outcomes:

After completing the course the students shall be able to :

- Understand the discrete structures and their representations
- Apply the structures to represent the given phenomenon
- Demonstrate the operations of discrete structures
- Analyse the truthiness of the statement

Unit	Sub Unit	Competency	Competency Indicators	Sessions
Set Theory	Definition of a set, Representation of elements of sets, Methods of representing sets,types of sets, operations on sets , cardinality of a set, Principle of Inclusion and Exclusion, Venn Diagram, Proof by using Venn diagram	Defining a set and its elements, finding length of set and performing various operations on sets,	Representing problem information using sets and Venn diagram and find the solution for the problem	8
Functions and Relations	Definition of Function, Types of Functions ,Composite Function, Relation definition, representation of relations	Defining function as a process and define domain and co-domain accordingly	Convert a process to mathematical expression to a function or a relation	8
Logic	Propositions, Logic Operations-Negation, Disjunction, Conjunction, Conditional and Biconditional, Truth Tables of compound propositions,	Different logic connectors, creating truth tables for compound propositions	Expressing a problem as a set of logical statements.	9

	Translating English sentences in to logical statements and vice versa, Logic gates and circuits			
Matrices	Matrix Definition, General Form, Representation of matrix in computers, Types of matrices, Operations on matrices: Addition, Subtraction and Multiplication, transpose , row / column transformations , Inverse of the matrix by Co-factor and Adjoint method, solutions to three variable problems by using matrices, application problems of matrices	Defining and representing data in the form of matrix and processing it as an unit.	Applying matrices for finding solution to multivariate problem.	10
Permutations, Combinations and Probability	Concept- Permutation, Combination, Sum and Product rules, problems on Permutation and combination (with wording atleast, atmost, neither nor, any one etc.) Concept and problem solving, general probability, conditional probability, partitions,Bayes Theorem	Counting possible number of outcomes for given experiment and calculating chance of occurrence of a desired event.	Applying probability concept to solve real life situations.	10

Reference Books:

Sr. No.	Name of the Author	Title of the Book	Year Edition	Publisher Company
1	Kenneth Rosen	Discrete Mathematics & its Applications, 6th Edition	2007	Tata Mc Graw Hill
2	Semyour Lipschutz & Marc Lipson	Discrete Mathematics, 2nd Edition	Reprint 2010	Tata Mc Graw Hill

MOOCs:

ResourcesNo.	Web site address
1	NPTEL Swayam www.coursera.com www. edx.com

Programme:BCA CBCS – Revised Syllabus w.e.f. - Year 2022 – 2023			
Semester	**Course Code**	**Course Title**	
I	**105**	**Lab on MS-Office Suite**	
Type of Course	**Credits**	**Evaluation**	**Marks**
Discipline Specific Course	2	UE(60)+IE(40)	100

Course Objectives :

The objective of this course is to help the student gain proficiency in text editing and formatting, spreadsheet and database processing/analysis, and presentation preparation. An additional objective ofthe course is for the student to gain basic knowledge of modern-day computing technology

Course Outcomes:

- Students are able to prepare documentation using MS-Word
- Demonstrate an advanced knowledge of the Word Processing package to design & create effective and structured documents like technical reports, letters, brochures, etc.,.
- Demonstrate the skills in the appropriate use of various features of the spread sheet package MS Excel to create useful spreadsheet applications like tabulated statements, balance sheets, statistical charts, business statements, etc
- Demonstrate the skills in making an effective presentation with audio and video effects using the. MS Power Point

Unit	Sub Unit	Competency	Competency Indicators	Sessions
Information Technology Essentials, Windows and Internet Explorer:	Verify the components of a typical computer system, Explore, maintain files, andcustomize the Windows operating system, Review using the Internet Explorer.	Understanding computer system and customising operating system	Identify various components of computer navigating through various options of operating system and customising it	4
MS Word	Introduction to MS Word, Menus, Shortcuts, Document typesWorking with Documents: a) Opening Files, Formatting page and Setting Margins, Converting files to different formats, Editing	understanding Word software Working with documents and its settings	word document preparation with proper formatting for given theme repairing time tables syllabus	8

	text documents, Using Toolbars, Ruler, Icons and help b) Formatting Documents: Setting Font Styles, Setting Paragraph style, Setting Page Style, Setting Document Styles c) Creating Tables: Table settings, Borders, Alignments, insertion, deletion, Merging, Splitting,Sorting, Formula d) Drawing: Inserting Pictures/Files etc., Drawing Pictures, Formatting &Editing pictures,Grouping and ordering, Rotating e) Tools: Word Completion, Spell Checks, Macros, Mail merge, Templates, UsingWizards, Tracking, Changes, Security	Formatting creating table in tabular data drawing objects pictures use mail merge	Structure using table Preparing Word document with graphical objects sending later reset to recipient using mail merge	
MS Power Point	a) Introduction: Opening new Presentation,Different presentation templates,Setting backgrounds, Selecting presentation layouts b) Creating a presentation: Setting presentation style, Adding Text to the presentation c) Formatting a presentation: Adding style, Color, gradient fills, Arranging objects, Adding Header & Footer,Slide background, Slide layout d) Adding Graphics to the presentation: Inserting pictures, movies, tables, etc into the presentation, Drawing Picturesusing Draw e) Adding effects to the presentation: Setting Animation & transition effect, Adding audio and videoPrinting	Understanding creation of PowerPoint presentation	Prepairing PowerPoint presentation for seminar topic yesterday presentation with animation Presenting a PowerPoint presentation of college department with proper graphics and effects	6

	Handouts and Generating standalone presentation viewer			
MS Excel	a) Introduction: Spreadsheet & its Applications , Opening spreadsheet, Menus & Toolbars &icons, Shortcuts , Using help b) Working with Spreadsheets: Opening a File, Saving Files, Setting Margins, Converting files to differentformats : Importing, Exporting and Sending files to others, Spreadsheet addressing, Entering and Editing Data: c) Computing data : Setting Formula, Finding total in a column or row, Mathematical Operations(Addition, Subtraction, Multiplication, Division, Exponentiation), Using other Formula d) Formatting Spreadsheets: Formatting – Cell, row, column Headers, Row Height, Column Width, Visibility – Row, Column, Sheet, worksheet Security e) Formatting – worksheet: Sheet Formatting & style - background, color, Borders & shading, Anchoring objects, Formatting layout for Graphics, Clipart etc., f) Working with sheets : Sorting, Filtering, Validation, Consolidation, Subtotal , Creating Charts, Selecting charts, Formatting charts, label, scaling etc.,	Working with Excel sheet, Spread sheet	Representing Excel sheet preparation for business application Visualisation of Excel data	4

	g) Using Tools: Error Checking, Spell Checks, Macros, Formula Auditing, Creating & using Templates, Tracking changes, customization, printing worksheet			
Working with Excel Functions	Concept of Functions, Commonly used functions: Sum, Max,Min, Average, Count,Today, Now, Datedif, Countif, CountA, CountBlank, Round, RoundUp, RoundDown, ABS, Sign, Ceiling, Floor, Trim, Value, Clean, sqrt, if, sumif **MS Access:** What is an Access Database, Opening a Database File, Create Table, Create andmodify fields of tables, Construct simple queries, Saving and Running Queries	Studying mathematical functions Understanding concept of database Studying how to write and use queries writing queries	applying mathematical functions for given Excel data Creating data bases studying how to write and use queries Writing queries for given database and problem	8

Programme: BCA CBCS – Revised Syllabus w.e.f. - Year 2022 – 2023			
Semester	**Course Code**	**Course Title**	
I	**106**	**Lab on C Programming**	
Course Type	**Credits**	**Evaluation**	**Marks**
Discipline Specific Course	2	UE(60)+IE(40)	100

Course Objectives :

- To make students practice on the procedure oriented programming using C
- To train the students for programming logic development

Course Outcomes:

- Develop skills to write simple programming concepts using C language
- Implement a real world problem using basic constructs of C language
- Develop an application using Decision making and looping And Make use of proper operators to solve problem
- Make use of Arrays and pointers efficiently and handling strings.
- Comprehend the dynamic memory allocation and pointers in C.
  Able to define new data types using enum, structures and typedef

Unit	Sub Unit	Competency	Competency Indicators	Sessions
Operators	Compilation and Executing programs Arithmetic operations Use of Symbolic constants Demonstrating the following gcc options -o, -c, -D, -l, -I, -g, -E Programs to demonstrate use of operators and Input/ output ***gcc or an equivalent compiler is assumed***. Compilation and Executing programs Arithmetic operations	Understanding of how to write program using input output statement and its execution	program writing using scanf print statements to perform various operations for given problem	5
Selection & Iteration Construct	Program to demonstrate the following - Branching – Nested Branching	use of branching looping statements in programming	writing programs using if if else switch case looks statement based	7

	- Looping Selection.		on the problem requirement	
Function and Storage Classes	Working with functions - Writing function prototype and definition - Using functions to solve problems (Calling a function) - Using recursion Storage classes - Using register, extern and static	Understanding of how to write user defined functions and study where to use it and how to use it	program writing using function with its various variants to solve the given problem	6
4 Arrays and Strings	Arrays and Strings 1D - Linear Search, Binary Search, Bubble Sort, Selection Sort, Insertion Sort2 D - Matrix operations Strings: program to do operations on string using library and user defined functions Finding length of string, String concatenation, removing extra spaces, get substring, check whether second string is part of another, converting string to lowercase, uppercase etc..	study array its types various search and sort technique using array study of string and its manipulation	program writing for search technique sorting techniques Matrix manipulation using array writing programs for string manipulation	7
5 **Structures &** **Pointers**	Structures Making use of structures to define new types(user defined types) Arrays of structure, display all elements of array and sorting of them. Pointers, Programs to demonstrate working of pointer; need of pointer, Pointer as parameter to function Comparison of pointer with arrays and using pointer to refer an arrayCreating pointer dynamically by using dynamic memory allocation Array of Pointers, Ragged Arrays, Function pointer.	study user defined data types structure union and concept of pointer	program writing for processing of stored data based on the problem requirement program to implement efficient memory usage for given problems problems	5

Programme:BCA CBCS– RevisedSyllabusw.e.f.-Year2022 –2023			
Semester	**Course Code**	**Course Title**	
I	**107**	**Universal Human Values**	
Type of Course	**Credits**	**Evaluation**	**Marks**
Value Addition Course	2	IA (50)	50

Course Objectives:

- To help the student to see the need for developing a holistic perspective of life.
- To sensitize the student about the scope of life – individual, family, society and nature/existence.
- Strengthening self-reflection.
- To develop more confidence and commitment to understand, learn and act accordingly.

Course Outcomes:

- Provide an overview of Prerequisites to Human Values
- Understand the role of a human being in ensuring harmony in self and society
- Analyse ethical dilemma while discharging duties in professional life.
- Evaluate ethical and unethical decisions and take a right stand
- Develop a harmonious environment for holistic development of self and body.

Unit	Sub Unit	Competency	Competency Indicators	Sessions
Introduction to Value Education	1. Value Education, Definition, Concept and Need for Value Education. 2. Self exploration as a means of Value Education.	Introduce the student to value and its need	Observe the change in behavior of the student	3
Harmony in Human Being	1. Human Being is more than just the Body. 2. Harmony of the Self ('I') with the Body - happiness and physical facility 3. Understanding Myself as Co-existence of the Self and the Body. 4. Understanding Needs of the Self and the needs of the Body. 5. Understanding the activities in the Self and the activities in the Body.	Understanding the Students version of Harmony in Human Being	Understanding the past behavior and giving a new perspective and analyzing the change.	7
Harmony in the Family and Society and Harmony in the Nature	1. Family as a basic unit of Human Interaction and Values in Relationships. 2. The Basics for Respect and today's Crisis: Affection, e, Guidance, Reverence, Glory, Gratitude, Prosperity and Love. 3. Comprehensive Human Goal: The Five Dimensions of Human Endeavour. 4. Harmony in Nature: The Four Orders in Nature. 5. The Holistic Perception of Harmony in Existence.	Making the Students understand the terms through various examples and bringing in a holistic perception of Existence	Through case studies interpretation students should be made aware of the importance of these in self and for family and society.	10
Professional Ethics	1. Value based Life and Profession. 2. Professional Ethics and Right Understanding. 3. Competence in Professional Ethics. 4. Issues in Professional Ethics – The Current Scenario.	Understanding the role of ethics.	Through past evidences (historical scriptures) bringing in the role of ethics in right understanding.	10

ReferenceBooks :

Sr.No.	Name of the Author	Title ofthe Book	Year Edition	Publisher Company
1	Bertrand Russell	Human Society in Ethics & Politics	2015	Taylor and Francis
2	I.C. Sharma	Ethical Philosophy of India	1965	Johnsen

Online Resources:

Online Resources No.	Website address
1	https://fdp-si.aicte-india.org/verifiedProgramDetailsList.php
2	https://citizenchoice.in/course/Universal-Human-Values/Unit%201/Happiness-and-Prosperity

MOOCs:

ResourcesNo.	Website address
1	Swayam.gov.in
2	https://epgp.inflibnet.ac.in

Programme:BCA CBCS – Revised Syllabus w.e.f. - Year 2022 – 2023			
Semester	**Course Code**	**Course Title**	
I	**108**	**Language-I**	
Type of Course	**Credits**	**Evaluation**	**Marks**
Ability Enhancement Course	2	IE (50)	100

Course Objectives :

To make students to:

1. Participate actively in discussions & debates
2. Give impromptu speeches and prepared presentations
3. Read, comprehend and summarize articles
4. Learn typical formats for writing and practice writing skills
5. Prepare power-point presentations
6. Receive extensive feedback on their oral and written skills

Course Outcomes:

After completing the course the students shall be able to

- Understand and read English better
- Write accurately and speak fluently.
- Participate actively in discussions and debates
- Give presentations.

Unit	Sub Unit	Competency	Competency Indicators	Sessions
Grammar and Translation	• Construction of sentences with there is, there are, it is etc. • Usage of articles, tenses and prepositions etc. • Translation of sentences, & passages from mother tongue to English • General errors in Sentence Constructions • Synonyms, Antonymous, use of appropriate words • Idioms & Phrases	Formation of English sentences with use correct of English Grammar	Understand and apply grammar, Translating sentences, use of idioms and phrases	6
Reading, Listening, and Comprehension skills	• Reading short passages aloud and discussion • Listening of conversations and answering questions • Comprehension of Short Passages	Fluent reading and comprehension of English passages	Pronouncing words, understanding of texts and answering questions thereon	6

	• Comprehensions of texts, judgments and other passages of more general nature			
Speaking skills	• Introducing oneself • Conversations between two student on a given topic/role play • Impromptu speech on a given topics • Debates and Logical reasoning	Use of English in self introduction, debates, logical reasoning and impromptu speech	Introducing oneself, participation in debates, logical reasoning and impromptu speech	6
Writing skills	• Writing correctly (Grammar, Punctuation) • Paragraph Writing • Letters – Structure & Layout (Business & Official letters) • Essay writing • Resume writing	English writing	Paragraph, essay, letter, resume writing	6
Presentation Techniques	• Preparing PowerPoint presentations • Preparing for class-room presentations	Giving English presentations	Making PowerPoint presentations, Giving presentation to class	6

Reference Books:

Sr. No.	Name of the Author	Title of the Book	Year Edition	Publisher Company
1	B.M. Sheridan	Speaking and Writing in English	2017	The Readers Paradise
2	Ellen Kaye	Maximize Your Presentation Skills: How to Speak, Look, and Act on Your Way to the Top	2002	Currency
3	Thomson and Martinet	*A practical English Grammar*	1970	The English Language Book Society and Oxford University Press
4	Wren and Martin,	*English Grammar and Composition*	latest edition	S. Chand, Delhi
5	Mike Gould	*Cambridge Grammar and Writing Skills Learner's Book 8*	2019	Cambridge University Press

Online Resources:

Online Resources No.	Web site address
1	https://www.passporttoenglish.com
2	https://www.youtube.com/user/EnglishLessons4U
3	http://www.5minuteenglish.com/grammar.htm
4	https://learnenglish.britishcouncil.org/skills/writing/a1-writing
5	https://www.skillsyouneed.com/presentation-skills.html

MOOCs:

Resources.	Web site address
1	https://www.my-mooc.com/en/mooc/english-grammar-style-uqx-write101x-3/
2	https://www.my-mooc.com/en/mooc/business-english-making-presentations/
3	https://www.my-mooc.com/en/mooc/english-for-effective-business-speaking/
4	https://www.my-mooc.com/en/mooc/english-for-business-and-entrepreneurship/
5	https://www.my-mooc.com/en/mooc/english-doing-business-asia-writing-hkustx-eba102x-1/