



PROGRAMME SPECIFIC OBJECTIVE:

The objective of the BCA programme is to prepare students for a career in software design, development and testing as well as IT support by training them in the core and emerging areas of computer applications.

BCA (Bachelor of Computer Applications)
Semester-IV

Course Type	Subject Code	Subject Title	Theory/ Practical	Credits	Weekly Contact Hours	Exam Duration	Marking Scheme		
							Internal	External	Total
Discipline Specific Course Core (Major)	US04MABCA01	Object Oriented Programming - I	T	4	4	2:30	50	50	100
	US04MABCA02	Operating Systems	T	4	4	2:30	50	50	100
	US04MABCA03	Practical based on US04MABCA01 and US04MABCA02	P	4	8	3:00	50	50	100
Minor	US04MIBCA04	Database Management Systems - II	T	2	2	1:30	25	25	50
	US04MIBCA05	Database Management Systems - II Lab	P	2	4	1:30	25	25	50
Ability Enhancement Course	US04AEBCA06	Software Project Management	T	2	2	1:30	25	25	50
Skill Enhancement Course	US04SEBCA07	System Analysis and Design	T	2	2	1:30	25	25	50
Value-Added Course (Any One)	US04VABCA08	Integrated Personality Development	T	2	2	1:30	25	25	50
	US04VABCA09	Life Skills and Self Enhancement	T	2	2	1:30	25	25	50



BCA (Bachelor of Computer Applications)

BCA (Semester-IV)

Course Code	US04MABCA01	Title of the Course	Object Oriented Programming - I
Total Credits of the Course	4	Hours per Week	4

Course Objectives:	<ol style="list-style-type: none"> 1. To study basic concepts of the Java programming language. 2. To understand the fundamental concepts of object-oriented programming using Java. 3. To learn the concepts related to classes, objects, interfaces, encapsulation, inheritance, exception handling, I/O management and packages. 4. To study the basic concepts of JDBC and collection framework.
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Course Content		
Unit	Description	Weightage* (%)
1.	Introduction <ul style="list-style-type: none"> – Introduction to salient features of Java and Java Virtual Machine (JVM) – Structure of a Java program – Tokens, comments, constants, variables and data types, scope of variables, type casting – Operators: arithmetic, relational, logical, assignment, increment/decrement, conditional, ternary operator & special operators – Decision making: if and switch statements – Looping: while, do...while, for and for each loop – Arrays : one and two dimensional arrays 	25
2.	Classes, Objects, Interfaces and Inheritance <ul style="list-style-type: none"> – Defining a class, members of a class: variables and methods, creating objects, constructors, accessing class members – Encapsulation – Static members v/s instance members – Introduction to inheritance, this and super keywords – Interfaces – Final variables, methods and classes – Abstract methods and classes – Introduction to method overloading and overriding 	25



3.	Exception Handling, I/O Management and Packages <ul style="list-style-type: none"> – Managing errors & exceptions: introduction, types of errors, exceptions, syntax of exception handling construct, multiple catch statements, the finally clause, defining and throwing user defined exceptions, the throw statement – Managing I/O files: introduction, concept of streams – Character stream classes – Introduction to the concept of a package, Java API packages, using the System package 	25
4.	JDBC and Collection Framework <ul style="list-style-type: none"> – Basic JDBC program Concept – Architecture of JDBC – Making the Connection, Statement & its types – Executing queries – List Interface (Array List, Vector List, Iterator) – Wrapper Class (Integer, Float and Double) and Methods 	25

Teaching-Learning Methodology	Blended learning approach incorporating both traditional classroom teaching as well as usage of ICT tools.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Evaluation	50%
2.	University Examination	50%

Course Outcomes: Having completed this course, the learner will be able to	
1.	understand the basics of Java programming language.
2.	understand the fundamental concepts of object-oriented programming using Java.
3.	understand the concepts related to classes, objects, interfaces, encapsulation, inheritance, exception handling, I/O management and packages.
4.	understand the basics of JDBC and collection framework.



Suggested References:

Sr. No.	References
1.	E. Balaguruswami, Programming with Java- A Primer, 3rd Edition, TMH Publication, 2014.
2.	Herbert Schildt, The Complete Reference – Java 2, 7th Edition, TMH Publication, 2017.
3.	Saba Zame , Handbook of Object technology, CRC Press, Washington DC, 1999.
4.	Mary Champion and Kathy Walrath, Java tutorial, Second Edition, Addison Wesley Pun. 1998.
5.	Steven Holzner, Java 2 Programming Black Book, 2005.

On-line resources to be used if available as reference material

Sr. No.	References
1.	https://www.tutorialspoint.com/
2.	https://www.w3schools.com/
3.	https://www.javatpoint.com/



BCA (Bachelor of Computer Applications)

BCA (Semester-IV)

Course Code	US04MABCA02	Title of the Course	Operating Systems
Total Credits of the Course	4	Hours per Week	4

Course Objectives:	<ol style="list-style-type: none"> 1. To understand the fundamental concepts of Operating Systems. 2. To learn the concepts of CPU scheduling, memory management, process synchronization and deadlocks. 3. To study the basics of Linux commands.
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Course Content		
Unit	Description	Weightage* (%)
1.	Introduction and Scheduling <ul style="list-style-type: none"> – Introduction to Operating System, Operating System Services – Different types of Operating Systems: Real time, Time sharing, Distributed and Multiprogramming. – OS Structure – Simple Structure, Layered Approach, Microkernel. – CPU Scheduling: Introduction to process, process control block, process scheduling, FCFS Scheduling, SJF scheduling, Priority scheduling, Round Robin scheduling 	25
2.	Memory Management <ul style="list-style-type: none"> – Memory Management: Concept, Basic memory management techniques – Swapping, Paging, The concept of a Page Fault – Page Replacement Algorithms: FIFO, LRU, OPT – The concept of virtual memory – Demand Paging 	25
3.	Process Synchronization, Deadlocks and Introduction to Linux <ul style="list-style-type: none"> – Introduction to Cooperating processes – Process Synchronization – Introduction to Critical Section Problem – Two process solution – The concept of a Deadlock and characterization – Introduction to Linux Operating System – Features of Linux 	25



4.	<p>Basic Linux commands</p> <ul style="list-style-type: none"> – Basic Commands: login, logout, date, man, pwd, who, dir, ls, cd, mkdir, rmdir, wc, echo – Use of Wild card characters – Types of FAP(File Access Permission), use of chmod command – Basic commands like cp, mv, rm, rev, file redirection, grep, cut, paste, find, sort commands with example – Introduction to shell script: execution of it, shell script variable, expr, test commands – Control structures: if, if..else, case structure – Iteration: while, for construct, break, continue, exit commands 	25
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Teaching-Learning Methodology	Blended learning approach incorporating both traditional classroom teaching as well as usage of ICT tools.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Evaluation	50%
2.	University Examination	50%

Course Outcomes: Having completed this course, the learner will be able to	
1.	gain knowledge on Operating Systems.
2.	understand the concepts of CPU Scheduling, Memory Management, Process Synchronization and Deadlocks.
3.	gain knowledge about basic Linux commands.



Suggested References:

Sr. No.	References
1.	Andrew S. Tanenbaum: Operating System - Deign & Implementation, Prentice Hall International, 2005.
2.	James Peterson and Abraham Silberschatz: Operating System Concept, Addition Wesley, 2009.
3.	Bryan Pfaffenberger, Linux Commands Instant reference , BPB Publication, 2001.
4.	Sumitabha Das - UNIX , Concepts and Applications – Tata McGraw-Hill Publications, 2006.
5.	Advanced Linux Programming – Samuel, Techmedia Publications, 2000.

On-line resources to be used if available as reference material

Sr. No.	References
1.	https://www.tutorialspoint.com/
2.	https://www.w3schools.com/
3.	https://www.javatpoint.com/



BCA (Bachelor of Computer Applications)

BCA (Semester-IV)

Course Code	US04MABCA03	Title of the Course	Practical based on US04MABCA01 and US04MABCA02
Total Credits of the Course	4	Hours per Week	4

Course Objectives:	<ol style="list-style-type: none"> 1. To provide practical knowledge on usage of the Java programming language. 2. To provide practical knowledge of Linux Operating Systems.
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Course Content		
Unit	Description	Weightage* (%)
1.	PART-A : Practical based on US04MABCA01	60%
2.	PART-B : Practical based on US04MABCA02	40%

Teaching-Learning Methodology	Practical-based learning in small groups and hands-on training through required ICT tools.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Evaluation	50%
2.	University Examination	50%

Course Outcomes: Having completed this course, the learner will be able to	
1.	gain practical knowledge on Java programming language.
2.	gain practical knowledge on Linux Operating Systems.

Vitthalbhai Patel & Rajratna P. T. Patel Science College
(Autonomous)

(Reaccredited with 'A' Grade by NAAC (CGPA 3.14))

Affiliated to SARDAR PATEL UNIVERSITY

Vallabh Vidyanagar, Gujarat

Syllabus effective from the Academic Year 2025-2026



Suggested References:

Sr. No.	References
1.	Balaguruswami : Programming in ANSI C., Tata McGraw Hill Publication, 2019.
2.	Kernighan B., Ritchie D., The C Programming Language, Prentice Hall, 1988.
3.	Cooper H. & Mullish H, The Sprit of C, Jaico Publication House, New Delhi, 2006.



BCA (Bachelor of Computer Applications)

BCA (Semester-IV)

Course Code	US04MIBCA04	Title of the Course	Database Management Systems - II
Total Credits of the Course	2	Hours per Week	2

Course Objectives:	<ol style="list-style-type: none"> 1. To understand the fundamental concepts of PL/SQL. 2. To learn the concepts of exception handling, stored subprograms, database triggers and packages.
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Course Content		
Unit	Description	Weightage* (%)
1.	<p>Basics of PL/SQL and Cursors</p> <ul style="list-style-type: none"> – PL/SQL - Introduction and advantages Understanding – PL/SQL Block structure – Variables, Constants and Expressions (CASE expression) – Conditional statement – IF and CASE statements – Controlling loop iterations – LOOP, EXIT WHEN, WHILE, FOR – Sequential control statement – GOTO and NULL – SELECT.....INTO statement – Working with cursor : introduction, types, attributes and processing (i.e. declaring, opening, fetching and closing), – Using cursor FOR loop and Parameterized cursor 	50
2.	<p>Exception Handling, Stored Subprograms, Database Triggers and Packages</p> <ul style="list-style-type: none"> – Error Handling : introduction, Types of exceptions – Working with In-Buit exception and user-defined exceptions – declaration, Raise_Application_Error, Pragma Exception_Init – Sqlcode And Sqlerrm – Stored procedures – introduction, creating, modifying, executing and dropping procedures – Stored functions – introduction, creating, modifying, executing and dropping functions – Database triggers – introduction, creating, modifying and dropping triggers, types of triggers – Packages – meaning, advantages, creating, modifying and dropping. 	50



Teaching-Learning Methodology	Blended learning approach incorporating both traditional classroom teaching as well as usage of ICT tools.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Evaluation	50%
2.	University Examination	50%

Course Outcomes: Having completed this course, the learner will be able to	
1.	gain knowledge on PL/SQL.
2.	understand the concepts of exception handling, stored subprograms, database triggers and packages.

Suggested References:	
Sr. No.	References
1.	Bipin C. Desai, An introduction to Database Systems, Galgotia Publications Pvt. Ltd, 2010.
2.	Ivan Bayross, SQL, PL/SQL The programming language of Oracle, 4th edition, BPB Publications, 2010.
3.	Kevin Loney, George Koch, Oracle9i The Complete Reference , Oracle Press, 2002.
4.	Buluksu Lakshman, Oracle9i PL/SQL : A developer's guide, Apress, edition 2003.



BCA (Bachelor of Computer Applications)

BCA (Semester-IV)

Course Code	US04MIBCA05	Title of the Course	Database Management Systems – II LAB
Total Credits of the Course	2	Hours per Week	4

Course Objectives:	<ol style="list-style-type: none"> 1. To understand the fundamental concepts of PL/SQL. 2. To learn the concepts of exception handling, stored subprograms, database triggers and packages.
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Teaching-Learning Methodology	Practical-based learning in small groups and hands-on training through required ICT tools.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Evaluation	50%
2.	University Examination	50%

Course Outcomes: Having completed this course, the learner will be able to	
1.	gain knowledge on PL/SQL.
2.	understand the concepts of exception handling, stored subprograms, database triggers and packages.



BCA (Bachelor of Computer Applications)

BCA (Semester-IV)

Course Code	US04AEBCA06	Title of the Course	Software Project Management
Total Credits of the Course	2	Hours per Week	2

Course Objectives:	<ol style="list-style-type: none"> 1. To understand the fundamentals of Software Project Management. 2. To understand the concepts of activity planning, project management and control.
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Course Content		
Unit	Description	Weightage* (%)
1.	<p>Project Evaluation, Project Planning, Software Process, Process Models & Risk</p> <ul style="list-style-type: none"> – Importance of Software Project Management – Activities Methodologies – list, definition with diagram – Categorization of Software Projects – types and introduction – Software Management Principles – Project portfolio Management – Stepwise Project Planning – Software process and Process Models – Choice of Process models: Rapid Application development, Agile methods, Extreme Programming, SCRUM, Risk Evolution 	50
2.	<p>Activity Planning, Project Management and Control</p> <ul style="list-style-type: none"> – Objective of Activity Planning – Sequencing and Scheduling – Network Planning Models: Forward pass and Backward pass, Critical Path (CRM) Methods, PERT Technique, Monte Carlo Simulation – Framework for Management and Control – RAG (Red Amber Green) Reporting – Techniques for Visualization - GANTT chart – Change Control 	50

Teaching-Learning Methodology	Blended learning approach incorporating both traditional classroom teaching as well as usage of ICT tools.
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Evaluation Pattern

Sr. No.	Details of the Evaluation	Weightage
1.	Internal Evaluation	50%
2.	University Examination	50%

Course Outcomes: Having completed this course, the learner will be able to

1.	understand the fundamentals of Software Project Management.
2.	understand the concepts of activity planning, project management and control.

Suggested References:

Sr. No.	References
1.	Bob Hughes, Mike Cotterell and Rajib Mall, Software Project Management, Fifth Edition, Tata McGraw Hill, New Delhi, 2012.
2.	Robert K. Wysocki, Effective Software Project Management, Wiley Publication, 2011.
3.	Walker Royce, Software Project Management, Addison-Wesley, 1998.
4.	Gopaldaswamy Ramesh, Managing Global Software Projects, McGraw Hill Education (India), Fourteenth Reprint, 2013.



BCA (Bachelor of Computer Applications)

BCA (Semester-IV)

Course Code	US04SEBCA07	Title of the Course	System Analysis and Design
Total Credits of the Course	2	Hours per Week	2

Course Objectives:	<ol style="list-style-type: none"> 1. To study the concept of a system and learn the System Development Life Cycle (SDLC). 2. To impart knowledge on fact finding techniques, input/output design and Data Flow Diagrams.
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Course Content		
Unit	Description	Weightage* (%)
1.	<p>Concepts of System and System Development Life Cycle (SDLC)</p> <ul style="list-style-type: none"> – Introduction to the concept of a system with examples – Elements and characteristics of systems – Types of systems – Introduction to System Analysis – Role of a System Analyst – Introduction to System Development Life Cycle (SDLC) – System Analysis: Problem Identification, Feasibility study, System requirement analysis – System Design: System design specification and programming, System implementation, follow up and maintenance, testing and evaluation 	50
2.	<p>Fact Finding Techniques, Input/Output Design and DFDs</p> <ul style="list-style-type: none"> – Introduction and need of Fact Finding Techniques – Fact Gathering Techniques : Interviewing, Questionnaires, Record Review – Inspection and Observation techniques – Input Design: Introduction to Data Capture, Objectives of DataCapture, Steps for Data Capture – Output Design: Design Principles of Output, Output objectives,Types of Output, Various forms of Outputs – Meaning and Significance of Data Flow Diagrams (DFDs) – Symbols used in DFDs – Rules for Constructing DFDs – Introduction and comparison between Physical and Logical DFDs 	50



Teaching-Learning Methodology	Blended learning approach incorporating both traditional classroom teaching as well as usage of ICT tools.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Evaluation	50%
2.	University Examination	50%

Course Outcomes: Having completed this course, the learner will be able to	
1.	gain knowledge about Systems and System Development Life Cycle (SDLC).
2.	understand the concepts of fact finding techniques, input/output design and Data Flow Diagrams.

Suggested References:	
Sr. No.	References
1.	S. Parthasarthy & B. W. Khalkar, System Analysis & Design, 1st Edition, Master Ed. Cons.,Nashik, 2012.
2.	James A. Senn, Analysis & Design of Information Systems, 2nd Edition, McGraw-Hill Int., 1989.
3.	V. Rajaraman, Analysis & Design of Information Systems, Printice Hall of India Private Ltd., 2003.



Course Code	US04VABCA08	Title of the Course	Integrated Personality Development
Total Credits of the Course	02	Hours per Week	02

Course Name: IPDC-2

Recommended Credit: 2

Course Duration: 30 Hours

The Integrated Personality Development Course – An Introduction

The Integrated Personality Development Course (IPDC) has been designed, by the BAPS Swaminarayan Sanstha, to enhance student awareness of India's glory and global values and create citizens who contribute to their families, college, workforce, community, and nation. This course supports the requirements of the National Education Policy (NEP), to "build character, enable learners to be ethical, rational, compassionate, and caring, while at the same time prepare them for gainful, fulfilling employment".

Easily integrated into the university syllabus, IPDC effectively teaches essential Indian values, develops character, strengthens morality, and nourishes constructive and creative thinking. Through this course, students can enjoy, understand, and practise priceless lessons, giving them the tools to prepare for a brighter future towards nation-building.

Introductory Resources:

<p><u>IPDC Intro</u></p> <p>IPDC-YouTube</p>	<p><u>Lecturer Glimpse</u></p> <p>IPDC - YouTube</p>	<p><u>IPDC Impact - 1</u></p> <p>IPDC - YouTube</p>
		

Type of Course:

Value-Based Holistic Personality Development Course for University Students.

Rationale / Scope:

IPDC aims to prepare students to become ideal citizens of India, promoting fortitude in the face of failures, Indian values like seva, pride for the Indian heritage, self-discipline amidst distractions and many more priceless lessons. The course enables students to become self-aware, sincere, and successful in their many roles – as ambitious students, reliable employees, caring family members, and contributing Indian citizens.

Course Outcomes/Objectives:

- To enhance awareness of India's glory and global values, and to create considerate citizens who strive for the betterment of their family, college, workforce, communication, and nation.
- To provide students with a holistic value-based education that will enable them to succeed academically, professionally, and socially.
- To give the students the tools to develop effective habits, promote personal growth, and improve their well-being, stability, and productivity.
- To allow students to establish a stronger connection with their family through critical thinking and the development of qualities such as unity, forgiveness, empathy, and effective communication.
- To provide students with soft skills that complement their hard skills, making them more marketable when entering the workforce.
- To inspire students to strive for a higher sense of character by learning from Indian role models who have lived principled, disciplined, and value-based lives.

Course-Content / IPDC Syllabus:

IPDC-2 is distributed across one semester and consists of 15 topics. Each topic will be 2 lecture hours per week, and therefore a total of 30 hours.

IPDC-2			
	Module & Subject	Topic Description	Hrs
1	Module: Remaking Yourself Subject: Begin with the End in Mind	Students will learn to visualize their future goals and will structure their lives through smart goals to give themselves direction and ultimately take them to where they want to go.	2
2	Module: Remaking Yourself Subject: Being Addiction-Free	Students will explore the detrimental effects of addictions on one's health, personal life, and family life. They will learn how to take control of their life by becoming addiction free.	2
3	Module: Selfless Service Subject: Case Study: Disaster Relief	Students will apply previous lessons of seva, to analyze the case study of the Bhuj earthquake relief work.	2
4	Module: Soft Skills Subject: Teamwork & Harmony	Students will learn the six steps of teamwork and harmony that are essential for students' professional and daily life.	2
5	Module: My India My Pride Subject: Present Scenario	To implement the transformation of India from a developing country into a developed country it is necessary to have a value-based citizen. Students will see how the transformation to a greater India relies on the vision and efforts of themselves as youth.	2
6	Module: Learning from Legends Subject: Leading Without Leading	Students will explore a new approach to leadership, through humility.	2
7	Module: My India My Pride Subject: An Ideal Citizen – 1	Students will learn that to become value-based citizens, they must first develop good values in their lives. They start by exploring the values of responsibility and integrity.	2
8	Module: My India My Pride Subject: An Ideal Citizen – 2	Students will learn that by developing the values of loyalty, sincerity, and punctuality; they become indispensable and can leave a strong impression. They will start developing these values by trying to keep perfection in every small task and by looking at the bigger picture.	2

9	Module: Facing Failures Subject: Timeless Wisdom for Daily Life	Students will learn the role wisdom plays in finding long-term stability. They will use ancient wisdom to solve their modern-day challenges.	2
10	Module: From House to Home Subject: Forgive & Forget	Students will understand the importance and benefits that forgiveness plays in their personal and professional life. They will learn to apply this knowledge in realistic situations.	2
11	Module: Remaking Yourself Subject: Stress Management	Students will learn to cope with current and future causes of stress.	2
12	Module: Remaking Yourself Subject: Better Health Better Future	A healthy body prevents disease and stress; increases positivity, productivity, and brainpower. Students will learn to maintain good health through regular exercise, healthy eating habits, and regular and sufficient sleep.	2
13	Module: Learning from Legends Subject: Words of Wisdom	A panel of learned and experienced mentors will personally answer practical questions that students face in their daily life.	2
14	Module: Soft Skills Subject: Financial Planning	Students will develop a variety of practical financial skills that prepare them to become financially stable throughout their future careers.	2
15	Module: Remaking Yourself Subject: Impact of Company	Students will understand that the type of company that we keep has a crucial role in determining who we are and who we will become. They will develop the ability to create a positive environment around them.	2

Lecture Breakdown:

In accordance with the academic structure, each topic will span a duration of two hours, which can be divided into two distinct lecture hours, as elaborated below.

During the **first hour**, the focus will be on contextualizing the topic for the week. Students will commence with an introductory film to spark curiosity. This is followed by a lecture video (part A) that introduces essential concepts, followed by a class discussion aimed at fostering active participation and engagement. These activities aim to facilitate the comprehension of foundational aspects related to the subject matter.

During the **second hour**, the topic will be explored in greater depth. A second lecture video (part B) will build upon the foundational knowledge. Thereafter, interactive activities including workbook activities, group discussions, critical thinking exercises, case studies, and topic analysis enable students to apply their acquired knowledge, thereby fostering a more comprehensive understanding of the subject matter with emphasis on practical application.

By adhering to this format, the IPDC lectures aim to provide a conducive learning environment where students can effectively acquire knowledge, develop practical application skills, and enhance their overall academic performance.

Core Components:

The IPDC lectures will take place in college classrooms and will be hosted by a university-appointed course instructor/faculty. BAPS will provide the teaching resources, guidance, and training to effectively implement the four components shown below.

1. Introductory Film

Each lecture begins with a short film that introduces the topic through modern production. The original content displays relatable scenarios and visuals that captivate the students' attention and stimulates their curiosity to learn more.

2. Lecture Video

Students watch a lecture video presented by a dynamic speaker. The lecture reinforces the significance and necessity of fundamental principles and skills. The experience of the speaker, eloquence of presentation, and use of interactive visuals collectively create a profound impact on each student's mind and heart.

3. Student Interaction

These sessions promote stimulating discussion and conversation and help create safe spaces for the healthy exchange of ideas. Thus, each session provides a forum in which students can openly express their emotions and thoughts.

4. Workbook Activities

Workbooks assist students implement the values taught in the lecture into their personal lives. Reliable research, priceless experience, practical scenarios, and reflective questions are innovatively depicted, motivating students to contemplate and think creatively.

Preview the IPDC Workbook at the link - <https://www.youtube.com/watch?v=C09aqOszvY>

Teaching and Examination Scheme:

Teaching Scheme: Lecture – 2 hrs/week

Examination Scheme

The assessments can include both continuous evaluation and end-of-semester examinations. The assessment scheme should include student attendance, assignments, mid-term exams, viva, workbook submission, and end-of-semester examinations.

The IPDC team will provide a question-bank resource with answers for each subject of IPDC to assist the faculties in creating exams. Marks distribution in theory and practical exams depends on the respective system of the institute/university.

Course Material / Main Course Workbook:

The IPDC-2 Workbook will be the official course material for the study of IPDC-2. The workbook will be designed and presented by BAPS IPDC Team. The workbook will serve as a basis for study, submission, viva and exams for students.

IPDC References –

These are the reference material for the IPDC lectures. This is not compulsory reading for the students as the essential information is contained in the workbooks.

No.	Module	References
1	Facing Failures	<ol style="list-style-type: none"> 1. Thomas Edison’s factory burns down, New York Times Archives, Page 1, 10/12/1914 2. Lincoln Financial Foundation, Abraham Lincoln's "Failures": Critiques, Forgotten Books, 2017 3. J.K. Rowling Harvard Commencement Speech Harvard University Commencement, 2008 4. Born Again on the Mountain: A Story of Losing Everything and Finding It Back, Arunima Sinha, Penguin, 2014 5. Failing Forward: Turning Mistakes Into Stepping Stones for Success, John C. Maxwell, Thomas Nelson, 2007 6. Steve Jobs: The Exclusive Biography Paperback, Walter Isaacson, Abacus, 2015 7. Failing Forward: Turning Mistakes Into Stepping Stones for Success, John C. Maxwell, Thomas Nelson, 2007
2	Learning from Legends	<ol style="list-style-type: none"> 1. Chase Your Dreams: My Autobiography, Sachin Tendulkar, Hachette India, 2017 2. Playing It My Way: My Autobiography, Sachin Tendulkar, Hodder & Stoughton, 2014 3. The Wit and Wisdom of Ratan Tata, Ratan Tata, Hay House, 2018 4. The Tata Group: From Torchbearers to Trailblazers, Shashank Shah, Penguin Portfolio, 2018 5. The Leader Who Had No Title, Robin Sharma, Jaico Publishing House, 2010 6. In the Joy of Others: A Life-Sketch of Pramukh Swami Maharaj, Mohanlal Patel and BAPS Sadhus, Swaminarayan Aksharpath, 2013
3	My India My Pride	<ol style="list-style-type: none"> 1. Rishis, Mystics, and Heroes of India, Sadhu Mukundcharandas, Swaminarayan Aksharpath, 2011 2. Physics in Ancient India, Narayan Dongre, Shankar Nene, National Book Trust, 2016 3. The Rise of Civilization in India and Pakistan, Raymond Allchin, Bridget Allchin, Cambridge University Press, 1982 4. The Āryabhaṭīya of Āryabhata: An Ancient Indian Work on Mathematics and Astronomy (1930), Walter Eugene Clark, University of Chicago Press, reprint, Kessinger Publishing, 2006
4	Remaking Yourself	<ol style="list-style-type: none"> 1. Power of Habit, Charles Duhigg, Random House Trade Paperbacks, 2014 2. Change Your Habit, Change Your Life, Tom Corley, North Loop Books, 2016 3. The Seven Habits of Highly Effective People, Stephen Covey, Simon & Schuster, 2013 4. Seven Habits of Highly Effective Teens, Sean Covey, Simon & Schuster, 2012 5. Atomic Habits, James Clear, Random House, 2018 6. How a handful of tech companies control billions of minds every day, Tristan Harris, TED Talk, 2017
5	From House to Home	<ol style="list-style-type: none"> 1. “What Makes a Good Life? Lessons from the Longest Study on Happiness”, R. Waldinger, Ted Talks, 2015 2. Long Walk To Freedom, Nelson Mandela, Back Bay Books, 1995 3. Outliers, Malcolm Gladwell, Back Bay Books, 2011
6	Soft Skills	<ol style="list-style-type: none"> 1. The 17 Indisputable Laws of Teamwork, John Maxwell, HarperCollins, 2013 2. Team of Teams: New Rules of Engagement for a Complex World, Stanley McChrystal, Portfolio, 2015 3. Predictably Irrational, Revised and Expanded Edition: The Hidden Forces That Shape Our Decisions, Dan Ariely, Harper Perennial, 2010
7	Selfless Service	<ol style="list-style-type: none"> 1. Open: An Autobiography, Andre Agassi, Vintage, 10 August 2010 2. The Physiological Power of Altruism [online], James Hamblin, The Atlantic, December 30, 2015, https://www.theatlantic.com/health/archive/2015/12/altruism-for-a-better-body/422280/ [last accessed June 10, 2020] 3. TBI Blogs: From Entrepreneurs to Doorkeepers, Everybody Serves with Love & Warmth at This Ahmedabad Café [online], The People Place Project, The Better India, May 29, 2017,

Basic Terms and Support Required from Institute:

Awarded Credits:

To ensure the full participation of the students, we insist the course be credit-based. The credits are according to the preference of the university.

Course Instructors:

As IPDC is about values and not just grades, an ideal candidate for teaching the course should be morally and ethically accomplished. The instructor should also be an effective communicator, well adept at conducting activities with the students. The required academic qualification for the instructor should be minimum graduation in any stream. We propose that all instructors appointed by your institute should attend an IPDC faculty workshop to get familiar with the style of the course. We are glad to inform you that BAPS is ready to provide this workshop.

Technical Requirements:

As elaborated in meetings and published in presentations, the foremost element of the course involves videos and interactive sessions which require a good level of audio/video amenities at the campus for students. A projector, laptop, internet connection, and basic audio-visual set-up are requisite for productive learning and positive outcome of the course.

IPDC Team will provide a digital portal to deliver all the IPDC video content. This platform allows smoothness in the learning and teaching process. IPDC Team will provide this digital system free of charge, and the University/Institute will approve and assist in implementing its use.

Approval of Teaching Mediums:

All the lecture videos and materials, alongside the teacher's guide, have been designed by BAPS and will be provided as discussed below.

The lecture videos will be provided through a web portal that runs on Windows devices or through a mobile app. This medium will be provided to all the registered teaching faculty, free of charge. The university should approve this medium and assist in the implementation of its use.

The IPDC workbook is an essential part of the course, as they provide the content and basis for the end-of-semester exams and the continuous assessments. The university should approve the use and purchase of this printed material for the students.

Registrations and Course-Beneficiaries Data:

To ensure the smooth implementation of the course, the university/institute will ensure that the students and faculties officially register with IPDC. For this purpose, the university/institutes will be required to provide the necessary information about the colleges, faculty members, and enrolled students in the course. Also, respective institutes need to provide enrolled students' final results in this subject for every batch in the format required by IPDC Team. IPDC Team will also offer a certificate to students upon completion of the course.

Fees/Charges:

BAPS Sanstha has always focused on social activities to empower the nation and its youth. This course focuses on moral and character development and is dedicated to providing holistic value-based education to the youth. So, as a noble service to society, we offer the course to your university/institute for free. All the following materials of all modules will be provided to end-users without any charges:

- Introductory Videos
- Main Lecture Videos
- Teacher's Guide
- IPDC Question Bank
- Exam Guide

However, the printed workbook for IPDC-2 is to be procured by students/institutes as per the printed price.

Copyrights/Intellectual Rights:

Copyright/IPR of all IPDC materials provided for the IPDC Course belongs to BAPS Swaminarayan Sanstha. Hence, the use of all these materials should be limited to the teaching of IPDC courses only.

For any further assistance please contact IPDC services.

Ph. 9099904146

E-mail: service.ipdc@in.baps.org



Bachelor Of Computer Application

B.C.A. Semester - 4

Course Code	US04VABCA09	Title of the Course	Life Skills and Self Enhancement
Total Credits of the Course	2	Hours per Week	2

Course Objectives:	Objective: The objective of this course is to impart basic knowledge of critical and creative thinking, decision making and problem solving, communication skills, time management, career counselling, interview skills develop in students.
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Course Content		
Unit	Description	Weightage* (%)
1.	<p>CRITICAL AND CREATIVE THINKING Critical Thinking, Creative Thinking, Characteristics of the Creative Person.</p> <p>DECISION MAKING AND PROBLEM SOLVING Decision Making, Problem Solving.</p> <p>COMMUNICATION SKILLS Understanding Basics of Communication, Different Ways of Communication, Components of Effective Communication, Common Barriers to Effective Communication, Listening Barriers, Barriers While Speaking, The Other Barriers Include, Reducing the Communication Gap.</p>	50%
2.	<p>TIME MANAGEMENT Essentials of time management, Principles of time management Change your mindset, How to change your mindset.</p> <p>CAREER COUNSELLING Career counsellor, Needs for career counselling.</p> <p>INTERVIEW SKILLS Curriculum Vitae, The Interview: Interview Skills, Before the Interview, Conducting Yourself during the Interview.</p>	50%

Teaching-Learning Methodology	<p>Direct Teaching through Chalk-Walk and Talk ICT enabled teaching</p> <p>Question-Answer</p> <p>Class discussion led by teacher/students Case Studies</p> <p>Literature review Problem solving activities Debate</p> <p>Collaborative and Co-operative Learning</p> <p>Think Pair Share</p> <p>Jigsaw</p> <p>Inquiry Based Learning Panel</p> <p>Discussion Project Based</p> <p>Learning Flipped Classroom</p> <p>Blended Learning designs</p>
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Evaluation Pattern

Sr. No.	Details of the Evaluation / Exam Pattern	50 Marks (%)	25 Marks (%)
1	Class Test (at least one)	15 (30%)	10 (40%)
2	Quiz (at least one)	15 (30%)	05 (20%)
3	Active Learning	05 (10%)	----
4	Home Assignment	05 (10%)	05 (20%)
5	Class Assignment	05 (10%)	----
6	Attendance	05 (10%)	05 (20%)
Total Internal (%)		50 (100%)	25 (100%)
University Examination (%)		50 (100%)	25 (100%)

Course Outcomes: Having completed this course, the learner will be able to

- (a) Develop the ability to think critically and creatively, enabling innovative approaches to challenges.
- (b) Gain the skills to make well-informed, timely, and impactful decisions in personal and professional contexts.
- (c) Build resilience and adaptability to tackle complex situations and implement practical solutions.
- (d) Overcome common barriers to communication, fostering mutual understanding and reducing gaps in interactions.
- (e) Develop interpersonal skills that enhance collaboration and teamwork through effective communication and decision-making.
- (f) Build confidence, emotional intelligence, and adaptability to excel in dynamic environments.
- (g) Develop the ability to prioritize tasks effectively and allocate time to meet deadlines.
- (h) Build confidence in navigating career transitions and understanding the requirements of various job markets.
- (i) Develop the ability to present oneself confidently and professionally during interviews

Suggested References:

Sr. No.	References
	<ol style="list-style-type: none"> 1. National cadets corps 2019 hand book 2. Dale Carnegie - How to Win Friends and Influence People 3. Daniel Goleman - Emotional Intelligence 4. Stephen R. Covey - The 7 Habits of Highly Effective People 5. Robin Sharma - The Monk Who Sold His Ferrari 6. Thinking, Fast and Slow-Authored by Nobel laureate Daniel Kahneman 7. The Art of Thinking Clearly-Rolf Dobelli 8. Cadet's Hand Book Common Subject, All Wings, By DGNCC, New Delhi. 9. Cadet's Hand Book Specialized Subject, Army, By DGNCC, New Delhi.



On-line resources to be used if available as reference material

On-line Resources:

1. <https://www.australiancurriculum.edu.au/f-10-curriculum/general-capabilities/critical-and-creative-thinking/>
2. https://www.cuesta.edu/student/resources/ssc/study_guides/critical_thinking/106_think_de-cisions.html
3. <https://graduate.northeastern.edu/resources/corporate-communication-skills/>
4. <https://corporatefinanceinstitute.com/resources/management/time-management-list-tips/>
5. <https://www.boisestate.edu/career/what-is-career-counseling/>
6. <https://www.coursera.org/in/articles/interviewing-skills>
7. Indiancc.nic.in.
8. DGNCC training App
