



B.Sc.(IT) (Bachelor of Science in Information Technology)
B.Sc.(IT) Semester-IV

Course Code	US04MABIT01	Title of the Course	Object Oriented Programming using Java
Total Credits of the Course	4	Hours per Week	4

Course Objectives:	<ol style="list-style-type: none">1. To introduce basic programming concepts and necessary constructs of the Java programming language.2. To understand the fundamental concepts of object-oriented programming using Java.3. To describe exception handling and Input Output Management
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Course Content		
Unit	Description	Weightage* (%)
1.	Introduction, Classes and Objects <ul style="list-style-type: none">– Introduction to salient features of Java and Java Virtual Machine (JVM)– Structure of a Java program– Defining a class, members of a class: variables and methods, creating objects, constructors, accessing class members– Encapsulation– Static members v/s instance members	25
2.	Interfaces and Inheritance <ul style="list-style-type: none">– Introduction to inheritance, this and super keywords– Interfaces– Final variables, methods and classes– Abstract methods and classes– Introduction to method overloading and overriding	25





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3.	Exception Handling, I/O Management <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	25
4.	Packages and Multithreading <ul style="list-style-type: none">– Introduction to package, Java API packages, using the System package.– Introduction to Multithreading– Thread Life Cycle– Creating Thread– Thread 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 Examination	50%
2.	University Examination	50%

Course Outcomes: Having completed this course, the learner will be able to	
1.	understand the basic programming concepts and necessary constructs of the Java programming language.
2.	understand the fundamental concepts of object-oriented programming using Java.
3.	describe exception handling and Input Output Management.
4.	Understand of the fundamental concepts related to Multithreading





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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/





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B.Sc.(IT) (Bachelor of Science in Information Technology)
B.Sc.(IT) Semester-IV

Course Code	US04MABIT02	Title of the Course	Introduction to Data Structures and Algorithms
Total Credits of the Course	4	Hours per Week	4

Course Objectives:	<ol style="list-style-type: none">1. To study fundamental concepts about data structures.2. To learn the basics of arrays, stacks and queues.3. To understand the concepts related to trees, linked lists, sorting and searching techniques.
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Course Content		
Unit	Description	Weightage* (%)
1.	Introduction to Data Structures <ul style="list-style-type: none">– Introduction to data structures - Definition, Types of Data Structures, applications and advantages– Primitive and non-primitive data structures and operations on them– Introduction to arrays, one and two-dimensional arrays– Representation of arrays in memory: row-major and column-major order– Address calculation of elements of one and two-dimensional arrays– Applications of arrays	25
2.	Stack and Queues <ul style="list-style-type: none">– Introduction– Operations on the Stack- Push, Pop, Peep, Change– Applications of Stacks– Infix, Postfix, Prefix Notations– Conversion: Infix to Postfix– Types of queues : Simple queues, Circular queues, Double endedqueues, Priority Queue– Applications of Queues– Operations on Simple Queues : Insert and Delete	25





3.	Introduction to Trees <ul style="list-style-type: none">– Definitions of basic terms : Tree, Directed Tree, Root, Leaf, Branch, Level, Node, Forest– Applications of a tree– Binary trees : introduction, linear and linked representations– Traversals of a binary tree: Preorder, Inorder and Postorder– Types of binary trees : Full Binary Tree, Complete Binary Tree, Binary Search Tree	25
4.	Linked Lists, Sorting and Searching techniques <ul style="list-style-type: none">– Introduction to linked lists– Types of linked lists: Singly linked lists, Doubly linked lists, Circular linked lists, Circular Doubly linked list– Operations on Singly Linked Lists: Insertion: at Front, Deletion: from Beginning– Introduction to Sorting and Searching– Sorting techniques - Bubble Sort and Merge Sort– Searching techniques - Sequential Search and Binary Search	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 Examination	50%
2.	University Examination	50%

Course Outcomes: Having completed this course, the learner will be able to	
1.	understand the fundamental concepts of various data structures.
2.	gain knowledge on Arrays, Stacks and Queues.
3.	understand the basic concepts of Trees, Linked Lists, Sorting and Searching techniques





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Suggested References:

Sr. No.	References
1.	Tremblay J. & Sorenson P. G., An Introduction to Data Structures with Applications, 2nd Edition, Tata McGraw-Hill Edition, 1991.
2.	Singh Bhagat & Naps Thomas, Introduction to Data Structures, Tata McGraw-Hill Publishing Co.Ltd., 1985.
3.	R. B. Patel, Expert Data Structures with C, Khanna Publications, ISBN: 81-87522-41-0, 2018.
4.	Samanta, Classis Data Structures, 2nd Edition, PHI Publication, 2009.
5.	G. S. Baluja, Data Structures through C, 4th Edition, Dhanpat Rai & Co., 2016.





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B.Sc.(IT) (Bachelor of Science in Information Technology)
B.Sc.(IT) Semester-IV

Course Code	US04MABIT03	Title of the Course	Practical based on US04MABIT01 and US04MABIT02
Total Credits of the Course	4	Hours per Week	8

Course Objectives:	<ol style="list-style-type: none">1. To impart the basic knowledge of data structures and file structures.2. To study the fundamental programming concepts and constructs using Java.3. To learn the basic concepts of object-oriented programming using Java.
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Course Content		
Unit	Description	Weightage*(%)
1.	Part-A : Practical based on US04MABIT01	60%
2.	Part-B : Practical based on US01MABIT02	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 Examination	50%
2.	University Examination	50%

Course Outcomes: Having completed this course, the learner will be able to	
1.	gain the basic knowledge of data structures and file structures.
2.	understand the fundamental programming concepts and constructs using Java
3.	describe the basic concepts of object-oriented programming using Java and Multithreading





B.Sc.(IT) (Bachelor of Science in Information Technology)
B.Sc.(IT) Semester-IV

Course Code	US04MIBIT04	Title of the Course	Database Management System - II
Total Credits of the Course	2	Hours per Week	2

Course Objectives:	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.	Basics of PL/SQL and Cursors <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





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2.	Exception Handling, Stored Subprograms, Database Triggers and Packages <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
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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 Examination	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.





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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, 4 th 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.





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Course Code	US04MIBIT05	Title of the Course	Database Management Systems – II LAB
Total Credits of the Course	2	Hours per Week	4

Course Objectives:	To understand the basics of PL/SQL including cursors, exception handling, stored subprograms, database triggers and packages.
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Course Content		
Sr.No	Description	Weightage* (%)
1	Practical Based on US04MIBIT04 (Database Management Systems – II)	100%

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 Practical Examination	50%
2.	University Examination	50%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Gain basic knowledge of PL/SQL including cursors, exception handling, stored subprograms, database triggers and packages





B.Sc.(IT) (Bachelor of Science in Information Technology)
B.Sc.(IT) Semester-IV

Course Code	US04AEBIT06	Title of the Course	Software Project Management
Total Credits of the Course	2	Hours per Week	2

Course Objectives:	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.	Project Evaluation, Project Planning, Software Process, Process Models & Risk <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.	Activity Planning, Project Management and Control <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





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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 Examination	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.





B.Sc.(IT) (Bachelor of Science in Information Technology)
B.Sc.(IT) Semester-IV

Course Code	US04SEBIT07	Title of the Course	E - Commerce
Total Credits of the Course	2	Hours per Week	2

Course Objectives:	<ol style="list-style-type: none"> 1. To study basics of E-Commerce and its classifications and models. 2. To understand basics of Electronic Marketplace and Customer Relationship Management.
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Course Content		
Unit	Description	Weightage*(%)
1.	Introduction To E-Commerce <ul style="list-style-type: none"> – Definition, communication perspective, business process perspective, service perspective – Classification by nature of transaction : B2B, B2C, C2C, C2B, Non business EC, Intra-business EC – Classification of EC Applications: electronic market, inter organizational system, customer services – Benefits to organizations, consumers, and Society – Limitations of EC, framework of EC, future of EC – E-Commerce Business Models – Introduction, eight key ingredients of a business model, major B2C and B2B business models, Introduction to M-Commerce 	50
2.	Electronic Marketplaces <ul style="list-style-type: none"> – Marketspace components, types of electronic markets (electronic storefronts, electronic malls, types of stores and malls) – Portals and their types, Role of intermediaries in E-markets, E-market success factors, competitive factors, Impact of E-Market on organizations (marketing, HR, manufacturing, finance and accounting) – Customer Relationship Management (CRM) – CRM : meaning, types of CRM, benefits and limitations of CRM, issues in CRM implementation, classifications of CRM applications, one-to-one marketing (personalization, collaborative filtering, customer loyalty, trust) 	50





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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 Examination	50%
2.	University Examination	50%

Course Outcomes: Having completed this course, the learner will be able to	
1.	understand the basics of E-Commerce and its classifications and models.
2.	understand the basics of Electronic Marketplace and Customer Relationship Management.

Suggested References:	
Sr. No.	References
1.	Jason G. Miles, E-Commerce Power, Morgan James Publishing, 2021.
2.	Brett Standard, E-Commerce Business, Novelty Publishing, 2019.
3.	P. T. Joseph, S. J. : E-Commerce An Indian Perspective, 3 rd Edition, Prentice Hall of India (PHI), 2009.
4.	Kenneth C. Laudon, Carol Guercio Traver : E-Commerce - Business, Technology, Society, 4 th Edition, Pearson, 2008.





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Course Code	US04VABIT08	Title of the Course	Current Trends in IT
Total Credits of the Course	2	Hours per Week	2

Course Objectives:	1. To acquire knowledge about recent trends in Information Technology. 2. To study the basic concepts related to search engine optimization, Internet of Things (IoT) and cloud computing
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Course Content		
Unit	Description	Weightage* (%)
1.	Search Engine Optimization <ul style="list-style-type: none">- Internet Basics- Internet Marketing- Search Engines Basics- Search Engine Algorithm- Vector Space Model- Using Search Engine- Search Engine Optimization	50
2	IoT And Cloud Computing <ul style="list-style-type: none">- Introduction to Internet of Things- Application Areas of IoT- Characteristics of IoT- Introduction to Cloud computing & Evolution of Cloud Computing- Applications of Cloud Computing- Benefits –Limitations of Cloud Computing- Cloud Services- Cloud Computing hardware and infrastructure	50





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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 Examination	50%
2.	University Examination	50%

Course Outcomes: Having completed this course, the learner will be able to	
1.	gain knowledge about recent trends in Information Technology.
2.	understand the basic concepts related to, search engine optimization, Internet of Things (IoT) and cloud computing.

Suggested References:	
Sr. No.	References
1.	The Art of SEO: Mastering Search Engine Optimization by Eric Enge, Stephan, 2015.
2.	Dr Rajiv Chopra, S.K. Kataria : Internet of Things (IoT), 1 st Edition, Sons Educational Publisher, 2022.





B.Sc. (IT) Sem. 4

Course Code	US04VABIT09	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:

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

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 Science
B.Sc. (IT) Semester – 4

Course Code	US04VABIT10	Title of the Course	NCC Army – II
Total Credits of the Course	2	Hours per Week	2
Course Objectives:	To impart basic knowledge of Social Awareness and Community development, social skills, health and Sanitation, Yoga, and Exercises.		
Course Content			
Unit	Description		Weightage* (%)
1.	Social Awareness & Community Development: Basics of Social Service, Contribution of Youth towards Social Welfare, Family Planning, Counter Terrorism, Corruption, Social Evils, Causes & Prevention of HIV/ AIDS, Civic Responsibilities, NGOs: Role & Contribution. Social Skills: Introduction, Etiquette: Meaning, Types of Etiquettes Mannerisms: Meaning, Bad Manners, Improving Social Skills.		50%
2.	Hygiene And Sanitation: <i>Hygiene:</i> Introduction, Personal Hygiene, Water Supply and Its Purification, Food Hygiene. <i>Sanitation:</i> Definition, Types Of Waste Products / Refuse, Sources of Refuse, Disposal of Waste Products /Refuse, Disposal of Human Waste, Disposal of Sewage. Yoga and Exercises: Introduction, Historical perspective and purpose of Yoga, Potential benefits of Yoga, Potential problems of Yoga.		50%

Teaching-Learning Methodology	Teacher- learner-Centered, Focused, Interactive /Participative.
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Internal and/or External Examination Evaluation

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

1.	To make NCC as an important part of the society.
2.	To teach positive thinking and attitude to the youths.
3.	To develop a sense of social harmony among the students and to inform them about the ways to remove them by giving information about social evils.
4.	To prepare good citizens who are useful to the society.
5.	To explain the importance of hygiene for a healthy life.
6.	To explain the importance of exercise and yoga in personal life.

Suggested References:	
Sr. No.	References
1.	Cadet's Hand Book Common Subject, All Wings, By DGNCC, New Delhi.
2.	Cadet's Hand Book Specialized Subject, Army, By DGNCC, New Delhi.
On-line Resources available that can be used as reference material:	
1.	Indiancc.nic.in
2.	DGNCC Training App

