MES Garware College of Commerce, Pune, India
(Autonomous)

Affiliated to
Savitribai Phule Pune University, Pune

Choice Based Credit System - CBCS
(2021 Pattern)
With effect from Academic Year 2021-22

Degree Programme of
Bachelor of Business Administration – Computer Application (BBA-CA)

Course Contents
Semester I

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Course Code: B4-21/101	Subject: Basic programming in 'C'	Marks: 100 Credits: 3

Course Objectives:

- To understand step-by-step analysis of the process of programming logic.
- To know the basic properties and syntax of C programming language.
- To understand input and output operation in C..
- To understand all decision making statements in C Language.
- To understand concept of array and string in C Language

Course Outcome:

After completing the course, the student shall be able to

CO1: Ability to visualize the representation the input, output, decisions, and calculations that take place within a program.

CO2: Understand the history, operators and data types of C Language.

CO3: Basic knowledge of input, output operations and practical implementation in coding.

CO4: Practical knowledge of if-else statement and loops used in C Language.

CO5: Practical implementation of arrays, string and storage classes in C language and build programming skills.

Unit	Unit Title	Contents
I	**Algorithm and Flowchart**	1.1. Concept: Problem, Algorithm. 1.2. Characteristics of an algorithm. 1.3. Examples 1.3.1. Addition / Multiplication of integers 1.3.2. Determining if a number is +ve / -ve , even / odd 1.3.3. Maximum of 2 numbers , 3 numbers

Unit	Unit Title	Contents
		1.3.4. Sum of first n numbers, sum of given n numbers , Sum of digits of a given number, sum of first and last digit of a Number. 1.4. Introduction of flow chart 1.5. Symbols of flowchart 1.6. Draw flowcharts for algorithms implemented in
II	**Introduction to C language**	2.1 History 2.2 Basic structure of C Programming 2.3 Language fundamentals 2.3.1 Character set, tokens 2.3.2 Keywords and identifiers 2.3.3 Variables and data types 2.4 Operators 2.4.1 Types of operators 2.4.2 Precedence and associativity 2.4.3 Expression
III	**Managing I/O operations**	3.1 Console based I/O and related built-in I/O functions 3.1.1 printf(), scanf() 3.1.2 getch(), getchar() 3.1.3 putch() and putchar() 3.1.4 sscanf() and sprintf()
IV	**Decision Making and looping**	4.1 Introduction 4.2 Decision making structure 4.2.1 If statement 4.2.2 If-else statement 4.2.3 Nested if-else statement 4.2.4 Conditional operator 4.2.5 Switch statement

Unit	Unit Title	Contents
		4.3 Loop control structures 4.3.1 while loop 4.3.2 Do-while loop 4.3.3 For loop 4.3.4 Nested for loop 4.4 Jump statements 4.4.1 break 4.4.2 continue 4.4.3 goto 4.4.4 exit
V	**Arrays and Strings**	5.1 Introduction to one-dimensional Array 5.1.1 Definition 5.1.2 Declaration 5.1.3 Initialization 5.2 Introduction to two-dimensional Array 5.2.1 Definition 5.2.2 Declaration 5.2.3 Initialization 5.3 Introductions to Strings 5.3.1 Definition 5.3.2 Declaration 5.3.3 Initialization 5.4 Standard library functions

Suggested Books:

Sr. No.	Name of Book	Author	Publication	Edition	Place
1	Let us C	Yashwant Kanetkar	BPB publication.	Sixteenth	New Delhi

Sr. No.	Name of Book	Author	Publication	Edition	Place
2	Ansi C	Balaguru swamy	McGraw Hill Education (India)	Third	New Delhi
3	The complete Reference	Herbelt Schildt	McGraw Hill Education (India)	Fourth	New Delhi

Suggested Web/E-Learning Resources :

Sr. No.	Topic of the course	Lectures (Available on YouTube / Swayam / MOOCS etc.)	Link	Journals / Articles / Case studies
1	C Programming	Swayam	https://onlinecourses.nptel.ac.in/noc21_cs81/preview	online course
2	Problem Solving through programming in C	Swayam	https://onlinecourses.nptel.ac.in/noc21_cs54/preview	online course
3	C Programming: Getting Started	edX	https://www.edx.org/course/c-programming-getting-started	online course

Course Code: B4-21/102	Subject: Database Management System (DBMS)	Marks: 100 Credits: 3

Course Objectives:

1. To know the basic database concepts, applications, data models, schemas and instances.
2. To understand the basics of data storage, data manipulation and data retrieval
3. To learn basics of data entity relationship and normalization
4. To learn the basics of SQL and construct queries using SQL in database creation and interaction.
5. To familiarize with the concept of Relational Database Management system.

Course Outcome:

After completing the course, the student shall be able to

CO1: Apply the basic concepts of Database Systems and Applications.

CO2: Understand to implement the E R model and relational model

CO3: Build a simple database system using different DML, DQL, DDL commands in SQL

CO4: Learn to apply various Normalization techniques to use Relational Database Management System.

Unit	Unit Title	Contents
I	**File Structure and Organization**	**File Structure and Organization** 1.1 Introduction 1.2 Logical and Physical Files 1.2.1 File 1.2.2 File Structure 1.2.3 Logical and Physical Files Definitions 1.3 Basic File Operations

Unit	Unit Title	Contents
		1.3.1 Opening Files 1.3.2 Reading and Writing 1.3.3 Closing Files 1.3.4 Seeking 1.4 File Organization 1.4.1 Field and Record structure in file 1.4.2 Record Types 1.4.3 Types of file organization 1.4.3.1 Sequential 1.4.3.2 Indexed 1.4.3.3 Hashed 1.5 Indexing 1.5.1 What is an Index? 1.5.2 When to use Indexes? 1.5.3 Types of Index 1.5.3.1 Dense Index 1.5.3.2 Sparse Index
II	**Database Management System**	**Database Management System** 2.1 Introduction 2.2 Basic Concept and Definitions 2.2.1 Data and Information 2.2.2 Data Vs Information 2.2.3 Data Dictionary 2.2.4 Data Item or Field 2.2.5 Record 2.3 Definition of DBMS 2.4 Applications of DBMS 2.5 File processing system Vs DBMS 2.6 Advantages and Disadvantages of DBMS

Unit	Unit Title	Contents
		2.7 Users of DBMS 2.7.1 Database Designers 2.7.2 Application programmer 2.7.3 Sophisticated Users 2.7.4 End Users 2.8 Views of Data 2.9 Data Models 2.10 Entity Relationship Diagram(ERD) 2.11 Extended features of ERD
III	**Relational Model**	**Relational Model** 3.1 Introduction 3.2 Terms 3.2.1 Relation 3.2.2 Tuple 3.2.3 Attribute 3.2.4 Cardinality 3.2.5 Degree of relationship set 3.2.6 Domain 3.3 Keys 3.3.1 Super Key 3.3.2 Candidate Key 3.3.3 Primary Key 3.3.4 Foreign Key 3.4 Relational Algebra Operations 3.4.1 Select 3.4.2 Project 3.4.3 Union 3.4.4 Difference 3.4.5 Intersection

Unit	Unit Title	Contents
		3.4.6 Cartesian Product 3.4.7 Natural Join
IV	**SQL (Structured Query Language)**	**SQL (Structured Query Language)** 4.1 Introduction 4.2 History Of SQL 4.3 Basic Structure 4.4 DDL , DML, DQL , DCL commands – 4.4.1 Structure – creation, alteration 4.4.2 Insertion of Data 4.4.3 Defining constraints – Primary key, foreign key, unique, not null, check 4.4.4 Functions - aggregate functions 4.4.5 Built-in functions – numeric, date, string functions 4.4.6 Set operations 4.4.7 Simple queries, Sub-queries, Nested queries 4.4.8 Use of group by, having and order by, 4.4.9 Use of Joins and its types 4.4.10 Transaction control commands – Commit, Rollback, Save point.
V	**Relational Database Design**	**Relational Database Design** 5.1 Introduction 5.2 Anomalies of un normalized database 5.3 Normalization 5.4 Normal Form 5.4.1 1 NF 5.4.2 2 NF 5.4.3 3 NF 5.4.4 BCNF

Suggested Web/E-Learning Resources :

Sr. No.	Topic of the Lecture	Lectures (Available on YouTube /Swayam/MOOCS etc.)	Films	Journals / Articles / Case studies
1	Introduction to Database Systems	https://onlinecourses.nptel.ac.in/noc21_cs52/preview		
2	Database and Content Organisation	https://onlinecourses.swayam2.ac.in/nou20_lb06/preview		
3	Database Management System	https://onlinecourses.swayam2.ac.in/cec21_cs11/preview		

Suggested Books :

Sr. No.	Name of Book	Author	Publication
1	Database System Concepts	By Henry korth and A.	Silberschatz
2	SQL, PL/SQL The Programming Language Oracle	Ivan Bayross,	BPB Publication.
3	Database Systems Concepts, Designs and Application	Shio Kumar Singh,	Pearson
4	Introduction to SQL	Reck F. van der Lans	Pearson
5	Modern Database Management	Jeffery A Hoffer , V.Ramesh, Heikki Topi	Pearson
6	Database Management Systems	Debabrata Sahoo	Tata McGraw-Hill

Course Code: B4-21/ 103	Subject: Business Statistics	Marks: 100 Credits: 3

Course Objectives:

1. To understand role, importance and applications of statistics in business.
2. To know the main properties of each measure of Central Tendency and select the most appropriate one for use with a given set of data.
3. To understand measures of Dispersion, Coefficient of Variation & Combined Standard Deviation.
4. To develop right understanding regarding Regression & Correlation.

Course Outcome:

After completing the course, the student shall be able to

CO1: Recognize the importance and applications of statistics in business.

CO2: Understand basic role of Central Tendency – Mean, Median, Mode & their features.

CO3: Understand measures of Dispersion, Coefficient of Variation & Combined Standard Deviation.

CO4: Understand Correlation, use of Regression Analysis & estimate the relationship between two variables and its applications.

Unit	Unit Title	Contents
I	Introduction to Statistics	1.1 Concept of Statistics, Role of Statistics, importance & its limitations. 1.2 Tabulation. 1.3 Data Condensation: Raw Data, Variable, Discrete Variable, Continuous Variable, Constant, Attribute with illustration. 1.4 Classification: Concept of Classification, Objectives of Classification, Types of Classification. 1.5 Frequency Distribution – Discrete and Continuous

Unit	Unit Title	Contents
		Frequency Distribution, Cumulative Frequency and Cumulative Frequency Distribution 1.6 Graphs & Diagrams: Histogram, Frequency Polygon, Frequency Curve, Ogive Curve, Pie – Diagram, Bar Diagram, Multiple Bar Diagram, Sub – Divided Bar Diagram.
II	Measure of Central Tendency	2.1 Concept of Measure of Central Tendency, Objectives of Measure of Central Tendency, Requirements of Good Measure of Central Tendency. 2.2 Types of Measure of Central Tendency – Arithmetic Mean (A.M), Median, Mode for Discrete and Continuous Frequency Distribution, Merits & Demerits of A.M., Median, Mode. 2.3 Determination of Mode and Median Graphically. 2.4 Empirical Relation Between Mean, Median and Mode. 2.5 Combined Mean. 2.6 Numerical Problems.
III	Measure of Dispersion	3.1 Concept of Measure of Dispersion, Requirements of Good Measure of Dispersion. 3.2 Types of Measure of Dispersion – Absolute & Relative Measure Dispersion, Range, Standard Deviation (S.D), Variance, Quartile Deviation, Coefficient of Range, Coefficient of Quartile Deviation, and Coefficient of Variation (C.V). 3.3 Combined Standard Deviation. 3.4 Numerical Problems.
IV	Correlation & Regression	4.1 Concept of Correlation, Types of Correlation. 4.2 Methods to Study Correlation – Scatter Diagram, Karl Pearson Correlation Coefficient. 4.3 Numerical Problems on Correlation. 4.4 Regression – Concept of Regression, Lines of Regression Equation of Y on X and X on Y.

Unit	Unit Title	Contents
		4.5 Regression Coefficients, Properties of Regression Coefficients. 4.6 Numerical Problems on Regression.

Suggested Books:

Sr. No.	Name of Book	Author	Publication	Edition	Place
1	Business Statistics	G. C. Beri	Mc-Graw Hill	Third	New Delhi
2	Business Statistics	J. K. Sharma	S. Chand	Fourth	New Delhi
3	Statistics Theory and Practice	R. S. N. Pillai	S. Chand	First	New Delhi
4	Fundamentals of Statistics	S. C. Gupta	Himalaya	Seventh	New Delhi
5	Business Statistics	G. V. Shenoy	New Age International	First	New Delhi

Suggested Web/E-Learning Resources :

Sr. No.	Topic of the Lecture	Lectures (Available on YouTube/Swayam/MOOCS etc.)	Link	Journals / Articles / Case studies
1	All	https://youtube.com/c/IcaiOrgtube		
2	All	College e-library https://sites.google.com/mespune.in/mesgarwarecollegeofcommercelib/library-membership?authuser=0		

Course Code: B4-21/ 104	Subject : Financial Accounting	Marks : 100 Credits : 3

Course Objectives :

1. To develop understanding regarding Accounting Concepts, Principles, Conventions and Accounting Standards.
2. To develop the understanding of recording of financial transactions in Subsidiary Books.
3. To develop proficiency in preparation of financial statements of Sole Proprietorship – Trading, Profit and Loss and Balance Sheet.
4. To understand the role of computers in accounting.

Course Outcome :

After completing the course, the student shall be able -

CO1: To understand Accounting Standards and how accounting concepts and conventions can be implemented in business.

CO2: To prepare necessary Subsidiary Books.

CO3: To prepare Final Accounts of Sole Proprietorship.

CO4: To understand importance of computers and to know the use of Tally in preparation of books of accounts.

Unit	Unit Title	Contents
I	Introduction Accounting Concepts, Principles, Conventions and Accounting Standards	1.1 Definition, objectives and scope 1.2 Accounting Concepts, Principles and Conventions 1.3 Accounting Standards- Introduction AS-1, AS-2, AS-9, AS-10
II	Accounting of Transactions	2.1 Voucher system

Unit	Unit Title	Contents
		2.2 Accounting process, accounting rules 2.3 Journal, Ledger, 2.4 Cash Book , Subsidiary Books
III	Final Accounts of Sole Proprietorship	3.1 Trial Balance 3.2 Preparation of Final Accounts of Sole Proprietorship(Trading and Profit & Loss Account and Balance Sheet)
IV	Computerized Accounting	4.1 Role of computers and financial applications 4.2 Accounting software package - Tally

Suggested Readings:

Sr. No	Title of Book	Author/s	Publication
1	Advance Accounting Vou- I	S.N. Maheshwari & S.K. Maheshwari	Vikas Publication
2	Advance Accounting Vou- I	M.C. Shukla , T.C. Grewal , S.C Gupta	S. Chand
3	Accountancy (Vol- I)	S. Kr. Paul	Central Educational Enterprises (P). Ltd.
4	Accounting (text and Cases)	Robert N. Anthony , David F. Hawkins , Kenneth A. Merchant	McGraw Hill Companies
5	Advanced Accountancy (Volume – I)	R.L. Gupta , M. Radha swamy	Sultan Chand & Sons

E-Resources :

Sr. No.	Topic of the Lecture	Lectures (Available on YouTube /Swayam/MOOCS etc.)	Films	Journals/Articles/Case studies
1	Introduction Accounting Concepts, Principles, Conventions and Accounting Standards	1. https://www.youtube.com/watch?v=Ue09moYLcZ4 2. https://www.youtube.com/watch?v=MicUd5qAYGE		1. http://ndl.iitkgp.ac.in/document/MDl5cHdNUUlnd0lnZHNoQXlvOG5lR3FHVzN4a3V2Z1hLc2R1em00NGRuYz0
2	Accounting of Transactions	1. https://www.youtube.com/watch?v=IC4xAGvqLC8 2. https://www.youtube.com/watch?v=Oq0qS6V1x5o		1. https://cleartax.in/g/terms/voucher
3	Final Accounts of Sole Proprietorship	1. https://www.youtube.com/watch?v=JXEBfTvHUO4 2. https://www.youtube.com/watch?v=3XsEufV_nws		
4	Computerized Accounting	1. https://diksha.gov.in/play/content/do_31310357550140620811842?contentType=ExplanationResource		1. https://files.eric.ed.gov/fulltext/EJ1134478.pdf

Course Code: B4-21/ 105	Subject: Principles of Management	Marks: 100 Credits: 3

Course Objectives:

1. To understand the fundamentals of Management
2. To study & understand management thoughts of different management thinkers .
3. To understand & examine the use of major management functions.
4. To explore & study recent trends of Management.

Course Outcome:

After completing the course, the student shall be able to

CO1: Understand the Fundamentals of Management.

CO2: Understand the thoughts of different Management thinkers.

CO3: Understand the importance of major management functions.

CO4: Understand the recent developments in management concepts such as Management of change & Management of Crisis

Unit	Unit Title	Contents
I	Nature of Management	1.1 Meaning, Importance & Functions of Management 1.2 Role of Managers , Qualities of Manager. 1.3 Management as an Art, Science, Profession and a Social System 1.4 Concept of Management, Administration, Organization.
II	Evolution of Management thoughts	2.1 Concept of Managerial thoughts 2.2 Contributions of Frederick Taylor, Elton Mayo, Henry Fayol and Peter Drucker, Applications of Management Theories,

		2.3 Indian Management ethos. 2.4 Different Style of Indian Management leaders example (Ratan Tata, Dhirubhai Ambani, N.R, Narayan Murthy, Varghese Kurien
III	Major Managerial Functions	3.1 Forecasting: Meaning, Need Types, Methods, Advantages, Limitations, 3.2 Planning: Meaning, Need Types, Process, Methods, Advantages, Disadvantages. 3.3 Organizing: Meaning, Concept, 3.4 Delegation of Authority: Meaning, Importance 3.5 Decentralization: Concepts, Meaning and, Importance 3.6 Decision Making: Types, Process, and Techniques 3.7 Directions: Nature and Principles. 3.8 Motivation: Meaning & Importance. 3.9 Controlling :Meaning, Needs, Process & Techniques 3.10 Other Management functions.
IV	Recent trends in Management	4.1 Management of Change, 4.2 Management of Crises, 4.3 Total Quality Management, JIT & Kaizen 4.4 Stress Management: Principles & Merits 4.5 Knowledge Management 4.6 Outsourcing Meaning , Merits and Demerits

Suggested Readings:

Sr No	Name of the Book	Author	Publication	Edition	Place
1	Management Concepts and Strategies	J.S. Chandan	Vikas Publishing House Pvt. Ltd.	--	New Delhi
2	Principles of Management	Harold Koontz , Heinz Weihrich , A. Ramachandra Arysri	McGraw hill companies	--	New Delhi
3	Management A Global and Entrepreneurial Perspective	Heinz Weihrich , Mark V. Cannice , Harold Koontz	McGraw hill companies	--	New Delhi
4	Management – 2008 Edition	Robert Kreitner , MamataMohapatra	Biztantra – Management For Flat World	--	New Delhi
5	Introduction to Management	John R. Schermerhorn	Wiley India Pvt. Ltd.	--	New Delhi
6	Principles of Management	P.C. Tripathi , P.N. reddy	McGraw hill companies	--	New Delhi
7	Management Text and Cases	R. SatyaRaju , A. Parthasarthy	PHI learning Pvt. Ltd	--	New Delhi
8	Management (Multi-Dimensional Approach)	H. R. Appannaiah , G. Dinakar , H.A. Bhaskara	Himalaya Publishing House	--	Mumbai
9	Principles of Management	L M Prasad	Himalaya Publishing House	--	Mumbai

E-Resources :

Sr. No.	Topic of the Lecture	Lectures (Available on YouTube /Swayam/MOOCS etc.)	Films	Journals / Articles / Case studies
1	All Topics	**https://onlinecourses.nptel.ac.in/noc20_mg58/preview**		
2	All Topics	https://www.classcentral.com		

Course Code: B4-21/106	Subject: Computer Laboratory Based on B4-21/101 and B4-21/102 (Practical)	Marks: 100 Credits: 4
Note : Laboratory work based on practicals in Paper Basic Programming in "C' (B4-21/101) and Database Management System (DBMS) (B4-21/102)		

Course Code: B4-21/ 107	Subject: Basics of IT (Skill Enhancement Course)	Marks: 50 Credits: 2

Course Objectives:

1. To make the students familiar with Computer environment.
2. To make the students familiar with the basics of Operating System and business communication tools.
3. To understand various installation of software.

Course Outcome:

After completing the course, the student shall be able to

CO1: Understand basics of computer Hardware and Software.

CO2: Understand Microsoft Office for Business communication and daily use.

CO3: Recognize installation process of Various software.

Unit	Unit Title	Contents
I	Introduction to Computer and Operating Systems	**1. Introduction to Computer** Definition, Block Diagram, Computer Hierarchy, Characteristics of Computer **2. Computer System Hardware** Computer Memory Input and Output Devices **3. Definition – Software** Software Types - System Software, Application Software **4. Definition of Operating System** Types of Operating Systems, Functions of Operating Systems **5. Working with Windows Operating System:** Introduction, The Desktop, Structure of Windows, Windows Explorer, File and Folder Operations, The Search, The Recycle Bin, Adding or Removing New Programs using, Control Panel, Applications in windows (Paint, Notepad, WordPad, and Calculator)

Unit	Unit Title	Contents
		6. **Introduction to Free and Open Source Software, Definition of Computer Virus:** Types of Viruses, Use of Antivirus software.
II	Office Automation tools	1. **MS-Word:** Introduction, Starting MS-Word, MS-Word Screen and its Components, Elementary Working with MS-Word 2. **MS-Excel**: Introduction, Starting MS-Excel, Basics of Spread sheet, MS-Excel Screen and Its Components, Elementary Working with MS-Excel 3. **MS-PowerPoint:** Introduction, Starting MS-PowerPoint, Basics of PowerPoint, MS-PowerPoint Screen and Its Components, Elementary Working with MS PowerPoint 4. **Data Processing**: Files and Records, File Organization (Sequential, Direct/Random, Index)
III	Installation of various software.	1. Installation of Windows (Latest version). 2. Installation of Linux (Red-hat, Ubuntu etc.). 3. Installation of Dual Boot (Windows + Linux) 4. Installation of Anti-virus. 5. Installation of MS-Office. 6. Practical demonstration of RAM, Hard Disk, Mother Board, Processor, Buses etc.

Suggested Books:

Sr. No.	Name of Book	Author	Publication	Edition	Place
1	Computer Organization	G.V. Anjaneyulu	Himalaya Publishing		Mumbai
2	Fundamentals of Computers	V. Rajaraman	PHI Learning		New Delhi
3	Computer fundamentals	Pradeep K. Sinha	BPB Publications		New Delhi

Suggested Web/E-Learning Resources :

Sr. No.	Topic of the Lecture	Lectures (Available on YouTube /Swayam/MOOCS etc.)	Films	Journals/Articles/Case studies
1	Introduction to Computer and Operating Systems	https://www.youtube.com/watch?v=iRJ1vrcczvQ&list=PLWp84cOxjEjMa8LnrnrncgswhsxaWO1VL NPTL		
2	Office Automation tools	https://onlinecourses.nptel.ac.in/noc20_me39/preview		
3	Installation of various software.	https://support.microsoft.com/en-us/office/install-office-apps-from-office-365-dcf2d841-dac7-455b-9a77-fc8f7ee92702 https://support.microsoft.com/		

Course Code:	Subject: Physical Education	Marks : 25
B4-21/ 108	(Physical Education, Sports and Yoga)	Credit : 1

Course Objectives:

1. To develop awareness regarding the importance of physical fitness in every individual.
2. To bring the overall awareness of values with regard to personal health and fitness.
3. To inculcate among students the desired habits and attitudes towards health to raise their health status.
4. To develop interest in exercise, sports and games for self-satisfaction and make it a part of life.

Course Outcome:

After completing the course the student shall be able to:

CO1: Students will achieve and maintain a health-enhancing level of physical fitness.

CO2: A commitment to exercising safely and effectively for the benefit of personal health and wellness.

CO3: Student will understand that physical activity provides opportunities for enjoyment, challenge and self-expression.

CO4: Student will be able to relate and develop a positive attitude towards physical fitness and sports that will help to improve physical, mental, social, emotional and spiritual health.

Unit	Unit Title	Contents
I	Physical Fitness	1.1 The Importance of Physical Fitness 1.2 Personal Fitness Program 1.2.1 Daily Activities 1.2.2 Diet 1.2.3 The Habit of Exercise 1.2.4 Exercise Session 1.3 Principles of Fitness

Unit	Unit Title	Contents
		1.4 Progressive Overload 1.5 Variety 1.6 Rest and Recovery 1.7 Reversibility 1.8 Consistency
II	Exercise Scientific Approach	2.1 Exercise 2.2 Importance of Warm Up 2.3 Cooling Down 2.4 Importance of Regular Exercises 2.5 Effect of Exercise and Training on Various Body Systems
III	Diet	3.1 Need of Diet and Nutrition 3.2 Classification of Nutrients 3.3 Balanced Diet 3.4 Water Balance in the Body 3.4 Better Health through Diet 3.5 Diet and Behavior
IV	Yoga & Pranayama	4.1 Ashtanga of Yoga 4.1.1 Yama 4.1.2 Niyama 4.1.3 Aasanas 4.1.4 Pranayama 4.1.5 Pratyahara 4.1.6 Dharana 4.1.7 Dhyana 4.1.8 Samadhi 4.2 Benefits of Yoga 4.3 Need of Yoga 4.4 Pranayama 4.5 Basics of Breathing 4.6 Pranayama

Unit	Unit Title	Contents
		4.7 Suryanamaskar
V	Active Lifestyle	5.1 Know yourself 5.2 Increase Physical Fitness 5.3 Make good use of your free time 5.4 Active during Weekly holidays 5.5 Know the Value of Efforts

Suggested Readings :

Sr.	Title of the Book	Author/s	Publication	Place
1.	Foundation of Physical Education, Exercise Science and Sports.	Bucher, C. A., &Wuest, D. A.	Tata McGraw Hill Education Private Limited	New Delhi
2.	Textbook of Applied Measurement Evaluation & Sports Selection.	Kansal, D. K.	Sports & Spiritual Science	New Delhi
3.	Advanced Fitness Assessment and exercise prescription	Hayward, V	Human Kinetics,	USA.
4.	Physical Activity and Health Guidelines	Rahl, R. V	Human Kinetics.	USA
5.	Light on Yoga	Iyengar, B.K.	Orient Longman Pvt. Ltd.	Mumbai
6.	Light on Astanga Yoga	Iyengar, B.K.	Alchemy Publishers.	New Delhi
7.	Guidelines for Yogic Practices	Gharote, M. L.	The Lonavla Yoga Institute	Pune