

**CURRICULUM  
FOR  
THIRD SEMESTER  
OF  
THREE-YEAR DIPLOMA COURSE  
IN  
COMPUTER ENGINEERING**

### STUDY SCHEME 3<sup>RD</sup> SEMESTER

Code	Subjects	Periods Per Week			Total Hours L+T+P	CREDITS			Total Credits L+T+P
		L	T	P		L	T	P	
COPC301	Digital Electronics	4	0	0	4	4	0	0	4
COPC302	Digital Electronics Lab	0	0	2	2	0	0	1	1
COPC303	Data Structures using 'C'	4	0	0	4	4	0	0	4
COPC304	Data Structures using 'C' Lab	0	0	2	2	0	0	1	1
COPC305	Computer Networks	4	0	0	4	4	0	0	4
COPC306	Computer Networks Lab	0	0	2	2	0	0	1	1
COPC307	Operating System	4	0	0	4	4	0	0	4
COPC308	Multimedia Applications	0	0	4	4	0	0	2	2
HS309	Stress Management, Ethical Practices and Yoga	0	0	2	2	0	0	1	1
		<b>16</b>	<b>0</b>	<b>12</b>	<b>28</b>	<b>16</b>	<b>0</b>	<b>6</b>	<b>22</b>

<b>PROGRAM: THREE YEAR DIPLOMA IN COMPUTER ENGINEERING</b>	
Course Code: <b>COPC301</b>	Course Title: <b>DIGITAL ELECTRONICS</b>
Semester: <b>3<sup>rd</sup></b>	Credit: <b>4</b>
Periods Per Week: <b>4 (L: 04, T: 0, P: 0)</b>	

### **COURSE OBJECTIVE:**

The course aims at introducing the concept of digital electronics which forms the foundation to the digital world of today's era. The subject aims to give a background in the broad field of digital systems design and microprocessors. It helps to acquire the basic knowledge of digital logic levels and application of knowledge to understand the digital electronic circuits.

### **COURSE CONTENT:**

#### **1. Introduction**

- 1.1 Introduction to Digital and Analog signals.
- 1.2 Comparison between analog and digital signals.
- 1.3 Applications and advantages of digital signals.

#### **2. Number System and Codes**

- 2.1 Binary, octal and hexadecimal number system: conversion from Octal, Decimal and hexadecimal to binary and vice-versa.
- 2.2 Binary addition, subtraction, multiplication and division including binary points. 1's and 2's complement method of addition/subtraction.
- 2.3 Representation of Numbers : 8421 & BCD.

#### **3. Logic Gates**

- 3.1 Definition, symbols and truth tables of NOT, AND, OR, NAND, NOR, EX-OR gates.
- 3.2 EX-OR, NAND and NOR as universal gates.

#### **4. Logic Simplification**

- 4.1 Postulates of Boolean algebra, De Morgan's Theorems. Various identities. Formulation of truth table and Boolean equations for simple problems. Implementation of Boolean (logic) equation with gates.
- 4.2 Karnaugh map (upto 4 variables) and simple applications in developing combinational logic circuits.

**5. Arithmetic circuits**

- 5.1 Half adder and Full adder circuit, design and implementation.
- 5.2 Half and Full subtractor circuit, design and implementation.
- 5.3 4 bit adder/subtractor.

**6. Latches and flip flops**

- 7.1 Concept and types of latch with their working and applications.
- 7.2 Operation using waveforms and truth tables of RS, T, D, Master/Slave JK flip flops.
- 7.3 Difference between a latch and a flip flop

**7. Introduction to Shift Registers**

- 8.1 Serial In Serial Out (SISO)
- 8.2 Serial In Parallel Out (SIPO)
- 8.3 Parallel In Serial Out (PISO)
- 8.4 Parallel In Parallel Out (PIPO)

**COURSE OUTCOME**

**After completion of this course the student will be able to:**

- Do conversions between the various number systems.
- Draw basic logic gates and universal gates and illustrate realization of Boolean Expressions using them.
- Design arithmetic circuits using logic gates.
- Design and test combinational and sequential logic circuits.

**RECOMMENDED BOOKS.**

1. Digital Electronics by Thomas Floyd.
2. Digital Electronics and Applications by Malvino Leach, Tata McGrawHill Education Pvt. Ltd, New Delhi.
3. Digital Logic Designs by Morris Mano, Prentice Hall of India, New Delhi.
4. Digital Electronics by R P Jain, Tata McGraw Hill Education Pvt Ltd, New Delhi.
5. Digital Electronics by K S Jamwal, Dhanpat Rai and Co., New Delhi.
6. Digital Electronics by B R Gupta, Dhanpat Rai & Co., New Delhi.

### UNIT WISE TIME AND MARKS DISTRIBUTION

Unit No	Time(hrs)	Marks(%age)
1.	04	10
2.	10	15
3	10	15
4	14	20
5	10	15
6	10	15
7	06	10
<b>TOTAL</b>	<b>64</b>	<b>100</b>

<b>PROGRAM: THREE YEAR DIPLOMA IN COMPUTER ENGINEERING</b>	
Course Code: <b>COPC302</b>	Course Title: <b>DIGITAL ELECTRONICS LAB</b>
Semester: <b>3<sup>rd</sup></b>	Credits: <b>1</b>
Periods Per Week : <b>2 (L: 0, T:0, P: 2)</b>	

### **COURSE OBJECTIVE:**

The objectives are to develop practical expertise in designing and constructing digital circuits, including logic gates, flip-flops, and counters. Students will gain proficiency in using laboratory instruments for circuit analysis and measurement, while also learning troubleshooting techniques to identify and rectify circuit errors. The course aims to foster hands-on skills, promote critical thinking in circuit analysis, and equip students with the ability to implement and validate digital circuit designs.

### **LIST OF PRACTICALS**

- 1.** Verification and interpretation of truth tables for AND, OR, NOT, NAND, NOR, EX-OR and EX-NOR gates
- 2.** Realization of logic functions with the help of NAND or NOR gates
- 3.** Verify De Morgan's Theorems.
- 4.** To design a half adder using XOR and NAND gates and verification of its operation & Construction of a full adder circuit using XOR and NAND gates and verify its operation
- 5.** 4 bit adder, 2's complement subtractor circuit using a 4 bit adder IC and an XOR IC and verify the operation of the circuit.
- 6.** To design a NOR Gate Latch and verification of its operation
- 7.** Verification of truth table for positive edge triggered, negative edge triggered, level triggered IC flip-flops (At least one IC each of D latch, D flip-flop, JK flip-flops).

<b>PROGRAM: THREE YEAR DIPLOMA IN COMPUTER ENGINEERING</b>	
Course Code: <b>COPC303</b>	Course Title: <b>Data Structures using C</b>
Semester: <b>3<sup>rd</sup></b>	Credit: <b>4</b>
Periods Per Week: <b>04 (L: 04, T: 00, P: 00)</b>	

### **COURSE OBJECTIVE:**

The objective of the "Data Structures using C" course is to provide students with a comprehensive understanding of essential data structures, including arrays, stacks, queues, linked lists, trees, graphs and different techniques for search and sorting. It also develops proficiency in implementing and manipulating these data structures using the C programming language and enhances problem-solving skills by applying data structures and algorithms to real-world scenarios.

### **COURSE CONTENT:**

#### **1. C-Fundamentals & Introduction**

- 1.1 Introduction to Data Structures
- 1.2 Data Types
- 1.3 Control Structures
- 1.4 Concept of pointer variables and constants.
- 1.5 Concept of Structure

#### **2. Arrays**

- 2.1 Concept of Arrays and basic idea about storage(row wise /column wise, without programming)
- 2.2 1-D array and various operations on it( traversing, inserting, deleting).
- 2.3 Concept of Linear and Binary Search in 1-D Array.
- 2.4 2-D array and various operations on it (Adding , Subtracting and Multiplication)

#### **3. Linked Lists**

- 3.1 Introduction to Singly Linked list.
- 3.2 Representation of Linked lists in Memory.
- 3.3 Traversing and Searching in a Linked list.
- 3.4 Insertion and Deletion into a Linked list.
- 3.5 Introduction to Doubly Linked List
- 3.6 Traversing a Doubly Linked list.
- 3.7 Insertion and deletion into Doubly Linked list

Note: All topics to be illustrated using both pseudo code and C-Code.

## **4. Stacks and Queues**

- 4.1 Introduction to Stacks.
- 4.2 Representation and Implementation of Stacks Using Arrays
- 4.3 Uses of Stacks.
- 4.4 Introduction to Queues.
- 4.5 Implementation of Queues Using Arrays
- 4.6 Basic idea about Implementation of Stacks and Queues using Linked Lists without Programming.

Note: All topics except 4.6 to be illustrated using both pseudo code and C-Code.

## **5 Trees**

- 5.1 Concept & representation of Binary tree.
- 5.2 Traversing Binary Trees (Pre-order, Post-order and In order).
- 5.3 Searching, inserting and deleting binary Trees.

Note: All topics to be illustrated using pseudo code only

## **6 Sorting**

- 6.1 Concept of Sorting.
- 6.2 Sorting algorithms (Bubble Sort, Insertion Sort, Merge Sort, Quick Sort) with Illustrations, Pseudo Code and C-Code using Arrays.

### **COURSE OUTCOME:**

#### **After the completion of the course the student will be able to:**

- analyze algorithms and algorithm correctness.
- summarize searching and sorting techniques.
- describe stack, queue and linked list operations.
- Solve problems based on tree.
- Implement various techniques of sorting

### **RECOMMENDED BOOKS:**

1. Data Structures using C and C++ by Rajesh K. Shukla, Wiley-India Pvt Ltd. Daryaganj, New Delhi.
2. Data Structures and Algorithm Using C by RS Salaria, Khanna Book Publishing Co. (P) Ltd. New Delhi.
3. Data Structure using C by Manoj Kumar Jambla, Eagle Publishing House, Jalandhar.
4. Data Structure using C by ISRD Group, Tata McGraw Hills Education Pvt Ltd , New Delhi.
5. Data Structures by Sanjiv Sofat, Khanna Publishers, New Delhi.
6. Expert Data Structures with C by R.B. Patel – Khanna Publishers, New Delhi.
7. Data structures – Schaum’s Outline Series – by Lipschutz, McGraw Hill Education Pvt Ltd , New Delhi.
8. Data structures – O.G. Kakde and U.A. Deshpande.
9. Data Structures by Kruse.
10. Data Structure using Pascal by Tenenbaum, Prentice Hall of India.



### UNIT WISE TIME AND MARKS DISTRIBUTION

Unit No.	Time Allotted (Hrs)	Marks Allotted (%)
1	7	10
2	9	12
3	15	25
4	10	18
5	10	15
6	13	20
<b>TOTAL</b>	<b>64</b>	<b>100</b>

<b>PROGRAM: THREE YEAR DIPLOMA IN COMPUTER ENGINEERING</b>	
Course Code: <b>COPC304</b>	Course Title: <b>Data Structures using C Lab</b>
Semester: <b>3<sup>rd</sup></b>	Credit: <b>1</b>
Periods Per Week: <b>02 (L: 00, T: 00, P: 02)</b>	

**COURSE OBJECTIVES:**

This course covers array and linked list operations (insertion and deletion), stack and queue implementations (using arrays and pointers), various searching algorithms (linear and binary search), and data structure implementations such as binary search trees and sorting algorithms (bubble sort, insertion sort, quick sort, selection sort). Additionally, students will learn expression conversion from infix to postfix notation. Gain a solid foundation in essential data structures and algorithms.

**LIST OF PRACTICALS:**

Write programs in C to implement

1. Inserting and deleting elements in an array.
2. Insertion and deletion of elements in linked list.
3. Insertion and deletion of elements in double linked list.
4. Stack implementation using arrays.
5. Stack implementation using pointers.
6. Queue implementation using arrays.
7. Linear search in a given list.
8. Binary search in a given list.
9. Implementation of binary tree.
10. Implementation of bubble sort algorithm.
11. Implementation of insertion sort algorithm.
12. Implementation of quick sort algorithm.
13. Implementation of Merge sort algorithm.
14. Conversion from infix and post-fix notation.

<b>PROGRAM: THREE YEAR DIPLOMA IN COMPUTER ENGINEERING</b>	
Course Code: <b>COPC305</b>	Course Title: <b>Computer Networks</b>
Semester: <b>3rd</b>	Credit: <b>4</b>
Periods Per Week: <b>04 (L: 04, T: 0, P: 0)</b>	

### **COURSE OBJECTIVE:**

The objective of the course is to understand the fundamental concepts and principles of computer networks: The primary objective of this course is to provide students with a comprehensive understanding of the basic concepts and principles underlying computer networks. Students will learn about network topologies, protocols, architectures, and the different layers of the TCP/IP model. Students will acquire hands-on experience in configuring and troubleshooting network hardware components, such as routers, switches, and wireless access points.

### **COURSE CONTENT:**

#### **1. Networks Basics**

- 1.1. Concept and Uses of Computer Networks
- 1.2. Reference Model overview (OSI, TCP/IP)

#### **2. Physical Layer**

- 2.1. Types of networks (LAN, MAN and WAN)
- 2.2. Different network topologies like star, ring, hybrid, tree.
- 2.3. Transmission techniques(Simplex duplex and Half duplex)
- 2.4. Basics of Physical Media (Guided /Un Guided).
- 2.5. Concept of hub and Repeater

#### **3. Data Link layer(DLL)**

- 3.1. General Functions of DLL.
- 3.2. Concept of MAC Address.
- 3.3. Error detection(Parity Check and Checksum)
- 3.4. Correction techniques (Hamming Code)
- 3.5. Concept of Switch
- 3.6. Switching techniques(Circuit switching, Message switching and Packet switching)

#### **4. Network Layer**

- 4.1. General Functions of Network Layer
- 4.2. IP Addressing(Class A,B, C D & E)
- 4.3. IPv4 Packet format
- 4.4. Basics of Routing Protocols ARP and RARP.
- 4.5. Sub-netting

- 4.6. Basic concept of IPV6 (Need and importance only).
- 4.7. Concept of Router

**5. Transport Layer**

- 5.1. General Functions of Transport Layer
- 5.2. Transport layer protocols TCP, UDP
- 5.3. Multiplexing and de-multiplexing
- 5.4. Congestion Control
  - 5.4.1. Slow Start
  - 5.4.2. Congestion avoidance
  - 5.4.3. Fast Retransmit and fast recovery
- 5.5. Flow Control
  - 5.5.1. Stop and Wait
  - 5.5.2. Sliding window protocol(Go-Back-N)

**6. Session and Presentation Layers**

- 6.1 General functions of session layer
- 6.2 General functions of Presentation layer

**7. Application Layer**

- 7.1 General functions of Application Layer
- 7.2 Use of application layer protocols (HTTP, FTP,SMTP, POP ,IMAP)
- 7.3 Working of FTP and TELNET
- 7.4 Basic Concept of Gateways and comparison w.r.t Hub/Switch/Router.

**RECOMMENDED BOOKS:**

1. W. Stallings, "Computer Communication Networks", PHI, 1999.
2. Computer Networks – Third Edition – Andrew S. Tanenbaum, Prentice Hall of India.
3. Data Communications and Networking – Behrouz A. Forouzan, Third Edition TMH.
4. TCP/IP Protocol Suite" by Behrouz A. Forouzan Publisher: McGraw-Hill.
5. Internetworking with TCP/IP" by Douglas E. Comer and David L. Stevens Publisher: Pearson.

**UNIT WISE TIME AND MARKS DISTRIBUTION**

Unit No.	Time Allotted (Hrs)	Marks Allotted (%)
1	05	10
2	08	10
3	10	15
4	17	25
5	15	20
6	04	10
7	05	10
<b>Total</b>	<b>64</b>	<b>100</b>

<b>PROGRAM: THREE YEAR DIPLOMA IN COMPUTER ENGINEERING</b>	
Course Code: <b>COPC306</b>	Course Title: <b>Computer Networks Lab</b>
Semester: <b>3<sup>rd</sup></b>	Credit: <b>1</b>
Periods Per Week: <b>02 (L:0, T: 0, P: 2)</b>	

**COURSE OBJECTIVE:**

Develop skills in network design and implementation: Students will learn how to design and implement computer networks based on specific requirements. They will be exposed to network design methodologies, sub-netting and IP addressing. Through practical exercises and projects, students will gain the ability to plan, configure, and troubleshoot network infrastructures.

**LIST OF PRACTICALS:**

1. Making of cross cable
2. Making of straight cable
3. Identify the IP address of a workstation and the class of the address and configure the IP Address on a workstation
4. Sharing the resources in wired and Wireless network.
5. To Connect two pcs using peer to peer communication/via switch/via router.
6. Study and Demonstration of sub netting of IP address. Concept of DHCP.
7. Connectivity troubleshooting using PING, IPCONFIG ,IFCONFIG etc
8. Demonstration of Packet Tracer /Wireshark or any other network software.

<b>PROGRAM: THREE YEAR DIPLOMA IN COMPUTER ENGINEERING</b>	
Course Code: <b>COPC307</b>	Course Title: <b>Operating System</b>
Semester: <b>3<sup>rd</sup></b>	Credit: <b>4</b>
Periods Per Week: <b>04 (L: 04, T: 00, P: 00)</b>	

### **COURSE OBJECTIVES:**

The course provides the students with an understanding of human computer interface existing in computer system and the basic concepts of operating system and its working. The students will also get hands-on experience and good working knowledge to work in windows and Linux environments. The aim is to gain proficiency in using various operating systems after undergoing this course. While imparting instructions, the teachers are expected to lay more emphasis on concepts and principles of operating systems, its features and practical utility.

### **COURSE CONTENT:**

#### **1. Overview of Operating System**

- 1.1 Definition of Operating System and its types.
- 1.2 Operating System Services
- 1.3 System calls,
- 1.4 Operating System Structure

#### **2. Process Management**

- 2.1 Concept of process, Process State and Process Control Block
- 2.2 Process Scheduling, Scheduling Queues, Scheduler, Job Scheduler,
- 2.3 Inter process Communication: Shared Memory Systems, Message Passing Systems
- 2.4 Scheduling Algorithms, Preemptive and Non Preemptive, First come first serve (FCFS), Shortest Job first (SJF), Round Robin (RR)
- 2.5 Process Synchronization

#### **3. Deadlock**

- 3.1 Concept of Deadlock and Conditions for Dead lock
- 3.2 Methods for handling deadlocks(Dead Prevention ,Deadlock Avoidance, Deadlock detection
- 3.3 Deadlock recovery(Bankers Algorithm and Resource Allocation Graph)

#### **4. Memory Management**

- 4.1 Definition – Logical and Physical address Space,
- 4.2 Swapping

- 4.3 Memory allocation, Contiguous Memory allocation
- 4.4 Fragmentation
- 4.5 Paging – Principle of operation, Page allocation
- 4.6 Page replacement strategies(FIFO,LRU,LIFO, Optimal page Replacement)
- 4.7 Segmentation
- 4.8 Virtual Memory.

## **5. I/O management**

- 5.1 Dedicated Devices
- 5.2 Shared Devices
- 5.3 I/O Devices
- 5.4 Storage Devices
- 5.5 Buffering and Spooling

## **6. File Management**

- 6.1 Basic concepts of File system and its types
- 6.2 Types of File System; Simple file system, Basic file system,

## **COURSE OUTCOME:**

### **After the completion of the course the student will be able to:**

- describe various types and services of operating system
- identify the concept of process, various states in the process and their scheduling.
- classify different types of schedulers and scheduling algorithms
- identify the significance of inter-process communication and synchronization.
- describe deadlock and the various ways to recover from deadlock
- identify memory management techniques
- describe virtual memory and its underlying concepts

**RECOMMENDED BOOKS:**

1. Operating System Concepts by Silberschatz, Galvin; Wiley Publication
2. Operating System by Stallings; Tata McGraw Hill.
3. Operating Systems- A Concept Based Approach by DhamDhare; Tata McGraw Hill Education Pvt Ltd , New Delhi
4. Operating Systems by Achyut S Godbole and AtulKahate; Tata McGraw Hill Education Pvt Ltd , New Delhi

**UNIT WISE TIME AND MARKS DISTRIBUTION**

<b>Unit No.</b>	<b>Time Allotted (Hrs)</b>	<b>Marks Allotted (%)</b>
1	08	10
2	15	25
3	15	20
4	15	25
5	06	10
6	05	10
<b>Total</b>	<b>64</b>	<b>100</b>



<b>PROGRAM: THREE YEAR DIPLOMA IN COMPUTER ENGINEERING</b>	
Course Code: <b>COPC308</b>	Course Title: <b>Multimedia Applications</b>
Semester: <b>3<sup>rd</sup></b>	Credit: <b>2</b>
Periods Per Week: <b>4 (L: 0, T: 0, P: 4)</b>	

### **COURSE OBJECTIVE:**

This course is aimed to learn the basic concepts and develop basic skills required creating, editing and publishing multimedia content

### **COURSE CONTENT:**

#### **1. Introduction**

- 1.1 Definition of concepts like multimedia and its components like text, graphics, video , audio and animation
- 1.2 Importance & Characteristics of Multimedia
- 1.3 Hardware and Software Components Used In Multimedia.

#### **2. Image Editing (Using Adobe Photoshop)**

- 2.1 Getting Acquainted with Photoshop i.e. Opening Images, Zooming, Scrolling, Undoing, Saving a file, Using the tools, options bar and other panels
- 2.2 Working with Selections i.e. using the Marquee, Lasso, Quick Selection, Magic Wand tools. Moving a selected area, Manipulating selections, rotating a selection
- 2.3 Basic Photo Corrections i.e. adjusting Resolution and image size adjusting the color Straightening and cropping the image. Brush tool, eraser tool, Clone stamp, heal tool, patch tool Spot Healing brush, blur tool, sharpen tool, smudge tool, Dodge tool, burn tool smudge tool
- 2.4 Layer Basics i.e. using the Layers panel rearranging layers applying a gradient to a layer applying a layer style Flattening and saving files

#### **3. Audio editing (using Audacity)**

- 3.1 Getting acquainted with audacity i.e. Opening files, Undoing, Saving a file, Control panel review: Start Recording, Play Recording, Stop Recording, Audacity Tools Tool Bar Use, Cursor and other options
- 3.2 Editing i.e. Understanding Noise Floor, Zooming in/out, Cutting and Pasting, Doing Pickups, Removing breaths, Removing Plosives, removing snaps Track Control Panel functions
- 3.3 Effects and Processing i.e. Reverb and echo, amplify, Limiter, Fades In & Out, Change pitch and tempo, Normalization, high and low pass filter, Exporting Tracks with Specific kbps Requirements

#### **4 Animation (using Adobe Animate)**

- 4.1 Getting Acquainted i.e. Starting Adobe Animate CC and Opening a File, Understanding Document Types, Understanding the Timeline, Using the Properties Panel, Using the Tools Panel, Undoing Steps in Animate, Previewing Your Movie, Modifying the Content and Stage, Saving Your Movie.
- 4.2 Creating Graphics, text and symbols i.e. Creating Shapes, Making Selections, Editing Shapes ,using Fills, Creating Curves, using Paint Brush, Creating and Editing Text, Creating Symbols, Importing Adobe Photoshop Files, Editing and Managing Symbols
- 4.3 Animating Symbols i.e. Animating Position, Changing the Pacing and Timing, Animating Transparency, Animating Filters, Animating Transformations, Changing the Path of the Motion, Swapping Tween Targets, Easing, Frame-by-Frame Animation, Exporting Final Movie
- 4.4 Tweening i.e. using Shape, Classic & Motion Tweens, Motion Guides for Classic Tweens, Copying and Pasting Tweens, Classic Tween Eases, Graphic Symbols, Manage Animation Content using Layers , Optimize the Publish Settings For The Output

**\*\*Recommended Softwares: Adobe Photoshop/GIMP, Adobe Animate/OpenToonz**

#### **RECOMMENDED BOOKS:**

1. Adobe Photoshop CC Classroom in a Book by Andrew Faulkner and Conrad Chavez
2. Adobe Photoshop 2023 Handbook by Jonjo Penney
3. Getting started with Audacity 1.3 by Bethany Hiitola , Stephen Daulton
4. The Book of Audacity – Record, Edit, Mix, and Master with the Free Audio Editor by Carla Schroder
5. Adobe Animate CC Classroom in a Book by Russell Chun
6. Beginning Adobe Animate CC: Learn to Efficiently Create and Deploy Animated and Interactive Content by Tom Green

#### **UNIT WISE TIME AND MARKS DISTRIBUTION**

<b>Unit No.</b>	<b>Time Allotted (Hrs)</b>	<b>Marks Allotted (%)</b>
1	20	30
2	14	25
3	30	45
<b>Total</b>	<b>64</b>	<b>100</b>

<b>PROGRAM: THREE YEAR DIPLOMA IN COMPUTER ENGINEERING</b>	
Course Code: <b>HS309</b>	Course Title: <b>Stress Management, Ethical Practices and Yoga</b>
Semester: <b>3<sup>rd</sup></b>	Credits: <b>1</b>
Periods Per Week : <b>2 (L: 0, T:0, P: 2)</b>	

### **COURSE OBJECTIVE:**

The objective of the course is to help students to develop themselves as good human being and a responsible citizen, besides developing the sense of right and wrong leading to ethically correct behavior. Further to educate the students about importance of yoga for physical and mental health to attain higher level of consciousness.

### **COURSE CONTENT:**

- 1. Introduction to Yoga**
  - 1.1 History of Yoga.
  - 1.2 Misconception about Yoga, Secular nature of Yoga.
  - 1.3 Aims and objectives of Yoga.
- 2. Stress Management**
  - 2.1 Definition of Stress, Causes of Stress, Symptoms of Stress.
  - 2.2 Coping with stress.
  - 2.3 Lifestyle management.
  - 2.4 Yoga for lifestyle management.
- 3. Yoga and Yogasnas**
  - 3.1 Components of Yoga.
  - 3.2 Basic Asans – Surya Namaskar, Child pose, Sarvasana, Bhujang asanas, Inclined plane.
  - 3.3 Simple breathing exercises.
  - 3.4 Pranayama and its types- Kapalbharti, Anuloma Viloma, Bhastrika.
- 4. Ethics & Values**
  - 4.1 Introduction to Ethics and Values.
  - 4.2 Gender equality for social progress.
  - 4.3 Patriotism and volunteerism as values.
  - 4.4 Work ethics – Punctuality, cleanliness, law abidingness, rational thinking and scientific temper.

## **RECOMMENDED BOOKS.**

- 1.** Swami Vigyananda Saraswathi – Yoga Vigyan
- 2.** Misra P.D. An introduction of Yoga
- 3.** Yogasanas by Swami Sivananda.
- 4.** Yoga and stress management by Acharaya Yetendra.
- 5.** Meditation: The First and Last Freedom" by Osho - Penguin Books India
- 6.** The Heartfulness Way: Heart-Based Meditations for Spiritual Transformation by Kamlesh D. Patel and Joshua Pollock - Westland Publications
- 7.** Light on Life: The Yoga Journey to Wholeness, Inner Peace, and Ultimate Freedom by B.K.S. Iyengar - Rodale Books India
- 8.** The Ethics of the Sages: An Interfaith Commentary on Pirkei Avot by Rami Shapiro - Skylight Paths Publishing (Indian edition)
- 9.** You Can Heal Your Life by Louise Hay (Indian edition) - Hay House India