Vivekanand College, Kolhapur (Autonomous)
B. Sc. Part – I (Computer science Entire) CBCS ,

Semester: I Computer science -Paper- I CC-CS-1303

A Introduction to computers and programming using C-I

Academic Year: 2018-19

Faculty Name: Miss Pallavi M Dessai & Mr.Rajesh R Mane

Teaching Plan

Section –I

MONTHS	UNIT NAME	POINTS TO BE COVERED
JULY	**I**-Introduction to Computer and Basic Organization	Definition of computer, characteristics, limitations, concepts of h/w and s/w, applications of computers in various fields, computer languages –high level, low level, assembly level, compiler, interpreter. Block diagram - Input Unit, Memory Unit, Output unit, Central processing unit
AUGUST	**II**-Input, Output Devices and Concept of Memory	Input devices: - Keyboard, Mouse, Light pen, Joystick, Touch screen, Digitizer, Scanner, MICR, OMR, Barcode reader. Output devices: - VDU, Printers – Dot-matrix, Inkjet, Laser, Line, Plotters Memory – Semiconductor and Magnetic memory. Secondary Storage devices: - Magnetic disk, Magnetic tape, Optical disk - CD ROM
SEPTEMBER	**III**-Operating System concepts	Definition and Functions of Operating System. Types of OS –Single user, Multi-user. Process Management-

		Multiprogramming, Multitasking, Multiprocessing, Time sharing. Disk Operating System (DOS), Booting Processes, DOS internal and external commands, concept of directory and file. Windows Operating system: Features of Windows O.S., GUI Modules of Windows – Windows Explorer, Control panel, Printer Manager. Windows accessories – Paintbrush, Notepad
OCTOBER	**IV**-Office automation and Database basic concepts	Study of Word Processors and Spreadsheet: Definition of Word Processor, Detail study of features of MS- WORD Definition of Spreadsheet, Detail study of features of MS-Excel Definition of Field, Record, Database. Data Base Management System Concept, (Primary and Foreign key) MS-Access Data types, Creating tables, Handling database-using queries.

Section –II

MONTHS	UNIT NAME	POINTS TO BE COVERED
JULY	**I**-Programming Concepts **II**-Introduction to C	Definition, Pseudo code conventions, Examples, Characteristics of an algorithm, Time complexity, Iterative, Recursion (e.g. Fibonacci Sequence & Array Recursive Sum)), Characteristics of algorithm, Notation of Algorithm, Flowcharts- Definition, Symbol, features.
AUGUST	**II**- Input-Output Statements	History of 'C', Structure of 'C' programming , Running and debugging the program, Character set and keywords, Constant and

		its type, Variable and its Data types in 'C', OperatorsArithmetic, logical, relational, bitwise, increment, decrement ,conditional, operator precedence
SEPTEMBER	**III**-Input-Output Statements	Character input-output - getch(), getche(),getchar(),putchar(),String input-output - gets(), puts() Formatted input-output - printf(), scanf()
OCTOBER	**IV**-Control Structures **V**- Array & Strings	Conditional control statements- if, if else, nested if, switch, Looping – for statements, nested for, while, do-while statements, Unconditional breaking control statements- break, continue, goto Array definition and declaration, Single and multidimensional array, String functions (strcpy(), strcmp(), strcat(), strlen(), strrev())

Name and Signature of Teacher

Mr.Rajesh R Mane

Name and Signature of HOD

Pallavi M Dessai

HEAD
DEPARTMENT OF B.SC. COMPUTER SCIENCE (ENTIRE)
VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)

VIVEKANAND COLLEGE ★ ESTD. JUNE 1964 ★ KOLHAPUR-416 003

Vivekanand College, Kolhapur (Autonomous)
B. Sc. Part – I (Computer science Entire) CBCS ,

Semester: II Computer science -Paper- I CC-CS-1303

A Introduction to computers and programming using C-II

Academic Year: 2018-19

Faculty Name: Miss Pallavi M Dessai & Mr.Rajesh R Mane

Teaching Plan

Section –I

MONTHS	UNIT NAME	POINTS TO BE COVERED
NOVEMBER	**I-** Computer Network Basic Concepts	Basic elements of a communication system – sender, receiver and medium Data Transmission modes – Simplex, Half Duplex, Full Duplex Data Transmission Media – wire pairs, Co-axial cable, Microwave System, Communication Satellite, Optical fiber Definition of networking, Types of networking – LAN, MAN, WAN Network Topologies - BUS, Ring, Star, Mesh and Hybrid
DECEMBER	**II-** IT Management	Definition of Information Technology IT Assets and its managements- Data –Access rules, confidentiality of data, Backup procedure. IT Act in brief , Define different terms as mentioned in IT Act – Access , Address , Data , Digital signature , Electronic form , Electronic Gazette , License , Electronic record , License ,

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		Private key, Public key etc.
JANUARY	**III-** Introduction to RDBMS	Data, Database, Database Management System, Concept of Data Models (Network, Hierarchical ,Relational), Concept of RDBMS, RDBMS Terminologies : relation, attribute, domain, tuple, entities, DBA & Responsibilities of DBA, Relational Model: Structure of Relational Databases, Relational Algebra
FEBUARY	**IV-** Structured Query Language (SQL)	Oracle Data types, Classification of SQL commands. 3. Create Table Command 4. Insert Command, Select Command using Where Clause, Delete Command and Update Command 5. Data Constraints : Primary Key and Foreign key

Section –II

MONTHS	UNIT NAME	POINTS TO BE COVERED
NOVEMBER	**I-** Pointers	Definition and declaration, Operations on pointer, Pointer initialization, Pointer And Array, Pointer of pointer, Dynamic memory allocation
DECEMBER	**II-** Functions	Definition, declaration, prototype of function, Local and global variable, User defined functions Storage classes, Recursion, Pointer and function, Call by value and Call by reference, Preprocessor
JANUARY	**III-** Structures and Union	Definition and declaration, Array of structures, Passing structure to function, Pointer to structure Nested structure, self referential structure, Sizeof and typedef, Definition of Union and declaration, Difference

		between structure and Union
FEBUARY	**IV-** File Handling	Concept of File ,Text and binary files, Opening and closing files, File opening mode- read, write, append, character and integer handling (getc(), putc() , getw() , putw()), Formatted inputscanf(), sscanf(), fscanf(), fread(), Formatted output- printf(), sprintf(), fprintf(), fwrite() Functions- fseek(), ftell(), fflush(), fclose(), fopen(), rewind()

Name and Signature of Teacher

Mr.Rajesh R Mane

Name and Signature of HOD

Pallavi M Dessai

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DEPARTMENT OF B.SC. COMPUTER SCIENCE
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Vivekanand College, Kolhapur (Autonomous)
B. Sc. Part – III (Computer science Entire) CBCS ,

Semester: V Paper XV Academic Year: 2018-19

Faculty Name: Rajesh R Mane Sub-E-Commerce

Teaching Plan

MONTHS	UNIT NAME	POINTS TO BE COVERED
June-JULY	I- Introduction to E-commerce	1.1 E-Commerce-Introduction And Definition 1.2 Goals of E-Commerce 1.3 Components of E-Commerce 1.4 Advantages and disadvantages of E-Commerce 1.5 Applications of e-commerce 1.6 E-Commerce models-(B2B, B2C, C2B, C2C, B2G)
AUGUST	II- Internet & Security	2.1 Internet –concept, use, applications 2.2 Domain Names and Internet Organization (.edu, .com, .mil, .gov, .net etc.) 2.3 Internet Service Provider 2.4 World Wide Web 2.5 Secure Transaction- concept, Authentication and authorization 2.6 Privacy on Internet 2.7 Computer Crime (Laws , Types of Crimes) 2.8 Threats-Concept, Types 2.9 Hacking and Virus 2.10 Cryptography- Concept, Encryption and Decryption 2.11 Digital Signature
SEPTEMBER	III- Electronic Data Interchange EDI	3.1 EDI concept 3.2 Advantages and disadvantages of EDI 12 3.3 Applications of EDI 3.4 EDI model
OCTOBER	IV- Electronic Payment System	4.1 Electronic payment- concept 4.2 Types of Electronic Payment System- Pre-paid, instant-paid, post-paid 4.3 Electronic Fund Transfer 4.4 Value Exchange System

Name and Signature of Teacher

Mr.Rajesh R Mane

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Name and Signature of HOD

Pallavi M Dessai

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Vivekanand College, Kolhapur (Autonomous)
B. Sc. Part – III (Computer science Entire) CBCS ,

Semester: VI **Academic Year: 2018-19**

Paper XXII Web Technology

Faculty Name: Mr.Rajesh R Mane

Teaching Plan

MONTHS	UNIT NAME	POINTS TO BE COVERED
NOVEMBER	**I-** Introduction	1.1 Introduction – Concept, Advantages and disadvantages of HTML, Basic structure of HTML program 1.2 1.2 Basic Tags of HTML –< HTML>, <HEAD>,<TITLE>,<BODY> 1.3 Text Formatting tags- <B>,<I>,<U>,<SUB>,<SUP>,<P>,<HR>, ,<EM>, <FONT> 1.4 LISTS TAGS<OL>,<UL>,<DL>
DECEMBER	**II-** Advanced HTML	2.1 Links - Anchor tag , working with images-<IMG> tag 2.2 Tables -< TABLE> tag and its attributes 2.3 Frames: and Tag with their attributes 2.4 Forms : INPUT Tag - TextBox - Radio Button – Checkbox – SELECT Tag and Pull Down Lists : Hidden - Submit and Reset
JANUARY	**III-** Cascading Style Sheet CSS	3.1 Introduction – Features – Style Sheet basics 3.2 Working with CSS files – Syntax – 3.3 Types of Style Sheets- Inline Styles, Embedded Styles, External or Linked Styles 3.4 Formatting Text and Fonts: Font Families, Font Size Kerning, Leading, and Indenting 3.5 Formatting Colors and Backgrounds: The Color Attribute, The Background Attribute Background Colors and Images.
FEBUARY	**IV-** Introduction to Web Application	4.1 History of the web, what is web? 4.2 Architecture of World Wide Web 4.3 Steps in web development 4.4 Tips for designing web page.

Name and Signature of Teacher

Mr.Rajesh R Mane

Name and Signature of HOD

Pallavi M Dessai

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Department of Computer Science Entire

Academic Year: 2018-2019

Annual Teaching Plan

Name of the teacher: Mrs. Vaishali C. Dalvi

Programme BSc Entire (BCS) Semester- V

Subject: computer science Course Title: VB.Net programming

Month –Jun			Module/Unit:	Sub-units planned
Lectures	Practical's	Total	Introduction	• Event driven & sequence driven programming • Introduction to c#, .net framework architecture • Assembly Namespace, Garbage collector JIT compilers
16	16	32		
Month –July			Module/Unit:	Sub-units planned
Lectures	Practical's	Total	Data Types & Control Structure	1. Variables, expressions, constants, Data Types , Operators, implicit & explicit conversions 2.Conditional statements 3.Loop statements 4.Unconditional statement
16	16	32		
Month –August			Module/Unit:	Sub-units planned
Lectures	Practical's	Total	Exception Handling	Errors-types of errors • Structured Exception – Try__Catch__End Try, finally, throw, • Unstructured Exception – On error GoTo, resume ,resume next. • Tracing Errors – Break Point, watch window, quick watch window, autos
16	16	32		
Month –September			Module/Unit:	Sub-units planned
Lectures	Practical's	Total	Developing GUI applications with Win Form	• Different controls in win form – Forms, textbox, labels, buttons, radio buttons, check box, combo box, list box, Date time picker • Important properties of controls, Important events of each control
16	16	32		
Month – October				
Lectures	Practicals	Total	Developing GUI applications with win form	• Menus, built in dialog box – input box, message box, Mouse events – click, double click, enter, hover, leave, move, Keyboard events – key press, key down, key-up
16	16	32		

Name and Signature of Teacher

Vaishali Dalvi

VIVEKANAND COLLEGE ESTD. JUNE 1964 KOLHAPUR-416 003

Name and Signature of HoD

Pallavi Dessai

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Vivekanand College, Kolhapur (Autonomous)

Department of Computer Science Entire

Academic Year: 2018-2019

Annual Teaching Plan

Name of the teacher: Mrs Vaishali C. dalvi

Programme : B.Sc. Computer Science Entire(BCS) Semester-VI

Subject: computer science Course Title: ASP.Net Programming

Month –November			Module/Unit:	Sub-units Completed
Lectures	Practical's	Total	Working with Classes	• Class & objects • Constructors • Inheritance • Polymorphism
16	16	32		
Month –December			Module/Unit:	Sub-units Completed
Lectures	Practical's	Total	Database Connectivity in C#	Database: Connections, command, Data adapters, and datasets • Connection to database using MS-Access, SQL Server • Data binding with controls like Text Boxes, List Boxes, Data grid etc. Data form wizard, • Data validation
16	16	32		
Month –January			Module/Unit:	Sub-units planned
Lectures	Practical's	Total	Using Crystal Report	Connection to Database, Table, Queries, Create and Modify Report, • Formatting Fields and inserting Header, Footer, Group
16	16	32		
Month –February			Model/Unit:	Sub-units completed
				• Details Working with formula fields, Parameter fields • Working with Multiple Tables Introduction to ASP. NET
Month –March			Module/Unit:	Sub-units Completed
Lectures	Practical's	Total	Introduction to ASP.Net with c#	• Working with web forms: Buttons, Text Boxes, Labels, Check Boxes, Radio Buttons, Tables, Panels, Images, Image Buttons, List Boxes, Drop-Down Lists, Hyperlinks and Link Buttons
16	16	32		

Name and Signature of Teacher

Vaishali Dalvi

VIVEKANAND COLLEGE ESTD. JUNE 1964 KOLHAPUR-416 003

Name and Signature of HoD

Pallavi Dessai

Note: In the above format, for each month for each teacher.

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Vivekanand College, Kolhapur

Department of Computer Science Entire

Academic Year: 2018-2019

Annual Teaching Plan

Name of the teacher: Miss Nita N . Bargale

Programme BSc Entire (BCS) Semester- V

Subject: computer science Course Title: core java

Month –june-july			Module/Unit:	Sub-units planned
Lectures	Practical's	Total	Introduction to java	•A Short History of Java, • Features of Java, • Java tools-JDK, JRE. • structure of java program –compilation and execution of program • JVM, Types of Comments, Data Types, Final Variable • Type Conversions - implicit and explicit conversion • Accepting input from console (Using scanner class and command line arguments).
16	16	32		
Month –August			Module/Unit:	Sub-units planned
Lectures	Practical's	Total	control statements, Classes and objects	•Control statements, for-each loop, Varargs, Declaring 1D, 2D array • Defining Classes, objects and method -method overloading • Array of Objects, Constructor, Overloading Constructors and use of 'this' Keyword • static keyword-static block, static Fields and Methods • methods (equals (), toString (), Wrapper Classes, finalize () Method
16	16	32		
Month –September			Module/Unit:	Sub-units planned
16	16	32	Package, Inheritance and Interface	•Package- Introduction to all predefined packages, User Defined Packages, Access Specifiers •Inheritance -Types of Inheritance-single, multilevel, hierarchical inheritance • Method Overriding

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				• Super Keyword, final keyword • abstract class and abstract methods • Defining and Implementing Interfaces
Month –October			Module/Unit:	Sub-units planned
16	16	32	. Exception Handling and Multithreading	Exception Handling- Concept, types- Checked and unchecked, try and catch block, multiple catch, Try-catch –finally block, throw and throws clause, finally clause. • Multithreading- What are threads?, difference between process and thread, Life cycle of thread, methods of thread class, runnable interface, isAlive() and join() methods, Thread priorities , Running multiple threads ,Synchronization and interthread communication- wait() , notify(),notifyAll() methods.

Name and Signature of Teacher
Miss. Nita N.Bargale

VIVEKANAND COLLEGE ESTD. JUNE 1964 KOLHAPUR 416 003

Name and Signature of HOD
Miss Pallavi M.Dessai

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DEPARTMENT OF B.SC. COMPUTER SCIENCE
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Note: In the above format, for each month for each teacher.

Vivekanand College, Kolhapur

Department of Computer Science Entire

Academic Year: 2018-2019

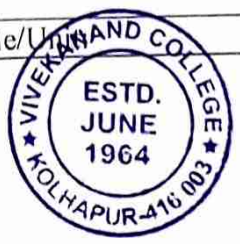
Annual Teaching Plan

Name of the teacher: Miss Nita N Bargale

Programme : B.Sc. Computer Science Entire (BCS) Semester-VI

Subject: computer science Course Title: core java

Month –November			Module/Unit:	Sub-units planned
Lectures	Practical's	Total	User Interface Components with AWT and Swing	Awt-What is AWT ? classes hierarchy, windows fundamentals Frame Windows Event Classes Mouse Event Class, Action Event Class, Window Event Class, Event Listner Interface: Mouse Listener, Action Listener, Window Listener and Key Listner AWT Controls: Labels, Text Field, Push buttons . Layout Managers (Flow Layout, Border Layout, Grid Layout, Card Layout) Swing- What is Swing? Difference between AWT and Swing., The MVC Architecture and Components – JFrame, JButton, JLabel, JText, JTextArea, JCheckBox and JRadioButton, JList, JComboBox, JMenu ,JtabbedPane , JScrollBar , Dialogs (Message, confirmation, input)
16	16	32		
Month –December			Module/Unit:	Sub-units planned
Lectures	Practical's	Total	**JDBC**	What is JDBC ? Steps for connectivity between Java program and database. Type of drivers, Simple program-database operations like creating tables, CRUD(Create, Read, Update, Delete) operations using SQL
16	16	32		
Month –January			Module/Unit:	Sub-units planned



16	16	32	Servlet	Introduction of servlet: How servelet work, model diagram Uses of servlet, Life cycle of servlet, Servlet API: packages- javax. servlet and javax. servlet.http Session Tracking Mechanisms, HttpSession, Cookies, URL-Rewriting, Hidden-Form Fields
Month –February			Module/Unit:	Sub-units planned
16	16	32	JSP	Introduction, Jsp LifeCycle, Jsp Implicit Objects & Scopes, Jsp Directives- 1.page 2.include 3.taglib Jsp Scripting Elements - 1.declaratives 2.scriptlets 3.expressions Simple application using JSP. Difference between JSP and Servlet

Name and Signature of Teacher
Miss. Nita N.Bargale

VIVEKANAND COLLEGE ESTD. JUNE 1964 KOLHAPUR-416 003

Name and Signature of HoD
Miss Pallavi M.Dessai

HEAD
DEPARTMENT OF B.SC. COMPUTER SCIENCE (ENTIRE)
VIVEKANAND COLLEGE, KOLHAPUR (AUTONOMOUS)

Note: In the above format, for each month for each teacher.

Vivekanand College, Kolhapur (Autonomous)

Department of Computer Science Entire

Academic Year: 2018-2019

Annual Teaching Plan

Name of the teacher: Miss Radhika M.Patil

Programme: B.Sc. Computer Science Entire (BCS) Semester-III

Subject: Computer Science **Course Title:** Object Oriented Programming Using C++

<table>
<tr><td colspan="3">Month June/July 18</td><td>Module/Unit:</td><td>Sub-units planned</td></tr>
<tr><td>Lectures</td><td>Practical's</td><td>Total</td><td rowspan="2">Introduction to C++ and Basics of Object Oriented programming Concepts</td><td rowspan="2">• Introduction to C++: Structure of C++ program, Input and output Streams,
• Memory
• management operators: new and delete, this pointer, Reference variables, Control Structures (looping and branching statements)
• Functions: inline function, default argument, function overloading.OOP
• Concepts: Data abstraction, Data Encapsulation, Inheritance, Polymorphism, Message Passing</td></tr>
<tr><td>16</td><td>12</td><td>28</td></tr>
<tr><td colspan="3">Month August 18</td><td>Module/Unit:</td><td>Sub-units planned</td></tr>
<tr><td>Lectures</td><td>Practical's</td><td>Total</td><td rowspan="2">Class and Object</td><td rowspan="2">• Class declaration, Access modifiers: public, private, protected, defining member functions (inside the class and outside the class)
• Static data members and member function, Array of object, friend function and friend class.</td></tr>
<tr><td>16</td><td>12</td><td>28</td></tr>
<tr><td colspan="3">Month Sept18</td><td>Module/Unit:</td><td>Sub-units planned</td></tr>
</table>

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16	12	28	**Constructor, Destructor, Operator Overloading**	• Constructor and Destructor: Definition and features of constructor, Types of constructor, • Definition, syntax and use of Destructor • Operator overloading :Concept, Rules for operator overloading, Unary and Binary Operator overloading
Month Oct/Nov 18			Module/Unit:	Sub-units planned
16	12	28	**Inheritance and Polymorphism**	• Inheritance: Concept, Definitions of base class and derived class, Types of inheritance (Single, Multiple, Multilevel, Hierarchical and Hybrid inheritance) • Polymorphism: Definition of polymorphism, Types of polymorphism, virtual function, pure virtual function, Abstract class..

Miss Radhika M. Patil

Name and Signature of HoD

(Miss Pallavi M.Dessai)

Note: In the above format, for each month for each teacher

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Vivekanand College, Kolhapur (Autonomous)

Department of Computer Science Entire

Academic Year: 2018-2019

Annual Teaching Plan

Name of the teacher: Miss Radhika M.Patil

Programme: B.Sc. Computer Science Entire (BCS) Semester-IV

Subject: Computer Science **Course Title:** Introduction to Data Structure Using C++

Month Dec 18			Module/Unit:	Sub-units planned
Lectures	Practical's	Total	**Introduction to Data structure and Linear Data Structures (Array, Stack, Queue)**	• Introduction to Data Structure Definitions: Data types, Data Object, Data structure, Abstract Data Type (concept), Data Structure classification • Algorithm Efficiency: Complexity, Big O notation, • Array: Definition, Types of array (one dimensional and multidimensional), Sparse matrices.
16	12	28		
Month Jan 19			**Module/Unit:**	**Sub-units planned**
Lectures	Practical's	Total	**Stack and Queue**	• Stack: Definition of Stack, Operations on Stack, Static Implementation of stack • Applications of stack: Recursion, inter conversions between infix, prefix and postfix expressions. • Queue: Definition of Queue, Operations on Queue, Static Implementation of • Queue.Types of Queue: Linear, Circular and Priority queue
16	12	28		

				• Applications of Queue.
Month Feb 19			Module/Unit:	Sub-units planned
16	12	28	**Linked List, Trees, Searching and Sorting algorithms**	• Linked List: Concept of Linked List, Operations on Linked List, Implementation of Linear Linked List, Types of Linked List, • Implementation of stack and queue using linked list • Trees: Definition of tree, Tree terminologies, Types of Tree, Tree Traversal(inorder, preorder, postorder).
Month March 19			Module/Unit:	Sub-units planned
16	12	28	**Searching and Sorting**	• Searching: Linear search and binary search • Sorting:Bubble Sort, Selection Sort, Insertion sort, Merge Sort

Miss Radhika M. Patil

Name and Signature of HoD

(Miss Pallavi M.Dessai)

Note: In the above format, for each month for each teacher

VIVEKANAND COLLEGE ESTD. JUNE 1964 KOLHAPUR-416 003

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Vivekanand College, Kolhapur (Autonomous)

Department of Computer Science Entire

Academic Year: 2018-2019

Annual Teaching Plan

Name of the teacher: Miss Radhika M.Patil

Programme: B.Sc. Computer Science Entire (BCS) Semester-V

Subject: Computer Science **Course Title:** Data Communication

<table>
<tr><td colspan="3">Month June/July 18</td><td>Module/Unit:</td><td>Sub-units planned</td></tr>
<tr><td>Lectures</td><td>Practical's</td><td>Total</td><td rowspan="2">Basics of Data communication</td><td rowspan="2">• Concept of data communication, Components: sender, receiver, message, Transmission media, Data Representation,
• Data Flow- Simplex, Half-duplex, and Full-duplex.
• Networks: Definition, Advantages and disadvantages.
• Network Architecture: Client/Server and Peer to Peer</td></tr>
<tr><td>16</td><td></td><td>16</td></tr>
<tr><td colspan="3">Month August 18</td><td>Module/Unit:</td><td>Sub-units planned</td></tr>
<tr><td>Lectures</td><td>Practical's</td><td>Total</td><td rowspan="2">Transmission media and modes</td><td rowspan="2">• Guided Media- Twisted-Pair Cable, Coaxial Cable and Fiber Optic Cable.
• Unguided Media: Radio Waves, Microwaves, Infrared Waves.
• Transmission Modes: Parallel, Serial- Asynchronous, Synchronous, Isochronous</td></tr>
<tr><td>16</td><td></td><td>16</td></tr>
<tr><td colspan="3">Month Sept 18</td><td>Module/Unit:</td><td>Sub-units planned</td></tr>
<tr><td>16</td><td></td><td>16</td><td>Network models, Protocols and Standards</td><td>• OSI model
• TCP/IP Model
• Protocols: concept, syntax, semantics, Timing
• Standards</td></tr>
<tr><td colspan="3">Month Oct/Nov 18</td><td>Module/Unit:</td><td>Sub-units planned</td></tr>
</table>

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16		16	**Multiplexing and Switching**	• Multiplexing: Frequency-Division Multiplexing, Wavelength-Division Multiplexing, Time Division Multiplexing. • Switching: Circuit switching- data gram and virtual circuit Switching, Packet Switching and Message Switching.

Miss Radhika M. Patil

Name and Signature of HoD

(Miss Pallavi M.Dessai)

Note: In the above format, for each month for each teacher

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VIVEKANAND COLLEGE ESTD. JUNE 1964 KOLHAPUR-416 003

Vivekanand College, Kolhapur (Autonomous)

Department of Computer Science Entire

Academic Year: 2018-2019

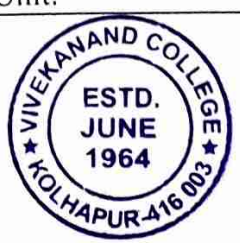
Annual Teaching Plan

Name of the teacher: Miss Radhika M. Patil

Programme: B.Sc. Computer Science Entire (BCS) Semester-VI

Subject: Computer Science **Course Title:** Computer Network

<table>
<tr><td colspan="3">Month Dec 18</td><td>Module/Unit:</td><td>Sub-units planned</td></tr>
<tr><td>Lectures</td><td>Practical's</td><td>Total</td><td rowspan="2">Physical Layer and Data Link Layer Protocols</td><td rowspan="2">• Physical layer: Digital-to-analog conversion: concept, Amplitude Shift Keying,
• Frequency Shift Keying, Phase Shift Keying. Analog-to-digital conversion: Pulse Code
• Modulation (PCM), Delta Modulation (DM).Data link layer: Design issues, Framing, Error Detection and Correction.
• Protocols- Sliding window protocol: one bit sliding window protocol, protocol using
• Go Back N, protocol using selective repeat.
.</td></tr>
<tr><td>16</td><td></td><td>16</td></tr>
<tr><td colspan="3">Month Jan 19</td><td>Module/Unit:</td><td>Sub-units planned</td></tr>
<tr><td>Lectures</td><td>Practical's</td><td>Total</td><td rowspan="2">Network Layer and Transport Layer</td><td rowspan="2">• Network Layer: Design issues, Concept of Routing.
• Routing Algorithms (Shortest Path, Flooding, Distance Vector Routing).
• Congestion Control Algorithms: Leaky Bucket, Token Bucket .
• Transport Layer: Services: connection oriented and connection less services.
• Transport Layer Primitives: listen, connect, send, receive, disconnect. Protocols: TCP, UDP.</td></tr>
<tr><td>16</td><td></td><td>16</td></tr>
<tr><td colspan="3">Month Feb 19</td><td>Module/Unit:</td><td>Sub-units planned</td></tr>
</table>



16		16	**Session and Presentation layer**	• Session layer: Services: dialog management, synchronization, activity • Management, exception handling Remote procedure calls (RPC). • Presentation Layer: Services- Translation, compression, encryption • Cryptography- Concept, Symmetric key Cryptography (e.g. AES-128, AES-192, AES-256 and DES .Explain any one of them) and Asymmetric key Cryptography (RSA, Diffie-Hellman Algorithm, The Elliptical Wave theory Algorithm. Explain any one of them).
Month March 19			Module/Unit:	Sub-units planned
16		16	**Application layer**	• Application layer: Function. Protocols- Domain name system (DNS), Hypertext • Transfer Protocol (HTTP), Simple Mail Transfer Protocol (SMTP), Telnet, File • Transfer Protocol (FTP).

Miss Radhika M. Patil

Name and Signature of HoD

(Miss Pallavi M.Dessai)

Note: In the above format, for each month for each teacher

VIVEKANAND COLLEGE ESTD. JUNE 1964 KOLHAPUR-416 003

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DEPARTMENT OF B.SC. COMPUTER SCIENCE (ENTIRE)
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VIVEKANAND COLLEGE (AUTONOMOUS), KOLHAPUR

B.C.S Part – II (Computer science Entire)

Semester: III Computer Science-II 2018-19

System Analysis, Design and Introduction to Software Engineering

Faculty Name: Miss. Nadiya D. Patel

Teaching Plan

Semester III

Section – I

Paper - System Analysis, Design and Introduction to Software Engineering

July			Module/Unit:	Sub-units planned
Lectures	Practical's	Total	UNIT 1. System Analysis And Design Overview	1. Meaning and Definition 2. Characteristics. 3. Element of system. 4. Types of system. 5. System Development Life Cycle- Classical model, water fall model.. 6. Feasibility Study : Operational, Technical, Economic. 7. Role & Skill Of System Analyst. 8. System planning and Initial Investigation 9. Fact Finding Technique- Interviews, Questionnaires, Record Interviews, Observation
04	00	16		
August			**Module/Unit:**	**Sub-units planned**
Lectures	Practical's	Total	UNIT 2. Charting Technique and Process	1. Decision Tables 2. Decision Trees. 3. Program Flowchart, System Flowchart. 4. Data Flow Diagram.-Levels of DFDs. 5. Entity Relationship Diagram a. Concept of Entity. b. Attributes. c. Types Of relation. 6. Normalization- Forms of Normalization Introduction to Joins: Simple/Inner Two tables Join, Left, Right, Outer join, Self join.
04	00	16	UNIT 3. Input - Output Design and Testing and Implementation	1. Input Design. 2. Output Design. 3. File Design.
September			**Module/Unit:**	**Sub-units planned**
04	00	16	UNIT 3. Input - Output Design and Testing and Implementation	4. Hardware and software selection 5. System Testing. 6. System Implementation. 7. Quality Assurance. 8. System Maintenance Definition, characteristics of

			UNIT 4. Software Engineering	software, Qualities (correctness, reliability, user friendliness, robustness, efficiency, maintability, reusability, portability, productivity, visibility) Case studies : College Admission system, Inventory Management System

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Name and Signature of Teacher
Miss. Nadiya Dara Patel

Name and Signature of HOD
Miss. Pallavi M. Dessai

Note: In the above format, for each month for each teacher.

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DEPARTMENT OF B.SC. COMPUTER SCIENCE
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B. Sc. Part – II (B.C.S.)
Semester IV 2018-19
Section – II
Paper VIII
Paper Title : RDBMS with Oracle

Name of the teacher: Miss. Nadiya Dara Patel

Programme: B.Sc. Computer Science Entire(B.C.S) **Semester-IV**

Month- November			**Module/Unit:**	**Sub-units planned**
Lectures	Practical's	Total		
04	00	16	Unit I: Introduction to RDBMS	1. Data, Database, Database Management System , RDBMS 2. Concept of Data Models, object based, Record Based (Network, Hierarchical ,Relational) , Physical 3. Concept of RDBMS Terminologies : relation, attribute, domain, tuple, entities 5. DBA & Responsibilities of DBA 6. Relational Model: Structure of Relational Databases, Relational Algebra
Month- December			**Module/Unit:**	**Sub-units planned**
Lectures	Practical's	Total		
04	00	16	UNIT 2. Structured Query Language (SQL).	1. Data types- fixed length, variable length, examples. 2. Classification of SQL commands- DDL, DML, DCL, TCL. 3. Data Constraints : Primary Key, Foreign key, Unique, Null, Check, Default 4. Select statement with where, group by, order by clause 5. SQL Operators : Logical, Relational, Special - In, Between, Like 9. SQL functions : Arithmetic, Conversion , Date and time, Aggregate Functions. 10 Sub Queries and Join - Sub queries and Nesting Sub queries, Join : Equi join, Simple Two table Join, Outer join, Self join 11. Views, Indexes, Sequence.
Month- January			**Module/Unit:**	**Sub-units planned**
04	00	16	UNIT 3. PL-SQL.	1. Comparison between SQL & PL-SQL. 2. Structure of PL-SQL block. 3. Control structure : if, case statements, Loops- Simple loop, for , while
Month- February			**Module/Unit:**	**Sub-units planned**
04	00	16	UNIT 4. Cursor And Triggers	1. Cursor-Concept, types- Implicit, Explicit, Steps to create Explicit cursor, Attributes of implicit and Explicit cursor. 2. Trigger- concept, syntax, Types- row level and statement level.

Name and Signature of Teacher
Miss. Nadiya Dara Patel

Name and Signature of HOD
Miss. Pallavi M. Dessai

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VIVEKANAND COLLEGE (AUTONOMOUS), KOLHAPUR

B. Sc. Part – III (Computer science Entire) 2018-19

Semester: V

Paper- XII Title :Software Engineering

Faculty Name: Miss. Nadiya D. Patel

Teaching Plan

Month- July			Module/Unit:	Sub-units planned
Lectures	Practical's	Total		
16	20	36	Unit-I Introduction To Software Engineering & Process Models Practicals : Operating System III	1.1 Introduction to Software Engineering 1.1.1 Definition, need for SE, 1.1.2 Software Engineering Problem 1.1.3 Software Engineering approach 1.1.4 Causes of and solutions for software crisis 1.1.5 Program vs. software product 1.1.6 Software Development Life Cycle 1.2 Process Models 1.2.1 Water fall model- Classical, Iterative 1.2.2 Prototyping Model 1.2.3 Spiral Model 1.2.4 Rapid Application Development (RAD) 1.2.5 Time boxing Model 1.3 Role and Skills of system Analyst.
Month -August			**Module/Unit:**	**Sub-units planned**
Lectures	Practical's	Total		
16	20	36	Unit-II Requirement analysis and specification Practicals : Operating System III	2.1 Requirements Anticipation and Investigation 2.2 Fact finding methods 2.3 Software requirement Specification (SRS)- concept, need, characteristics, components, structure of SRS, 2.4 Types of requirements - functional and non-functional 2.5 Metrics- size estimation, function point, quality metrics
Month- September			**Module/Unit:**	**Sub-units planned**
16	20	36	Unit-III Planning a software project Practicals : Operating System III	3.1 Process planning 3.2 Project estimation-Bottom-Up Estimation Approach, COCOMO Model 3.3 Project scheduling and staffing 3.4 Software configuration management plan 3.5 Quality plan 3.6 Risk management.
Month- October			**Module/Unit:**	**Sub-units planned**
16	20	36	Unit-IV Design and testing Practicals : Operating System III	4.1 Function-oriented design 4.1.1 Design principles 4.1.2 Module level concepts- Coupling and cohesion 4.1.3 Design notation and specification-structure charts, specification 4.1.4 structured design methodology 4.1.5 verification 4.2 Detail design 4.2.1 PDL 4.2.2 Logic/Algorithm design 4.2.3 Metrics-Cyclomatic Complexity, Data Binding, cohesion metric 4.3 Coding4.3.1 Programming principles and guide lines 4.3.2 Coding process 4.4 Testing4.4.1 Testing fundamentals

				4.4 Testing4.4.1 Testing fundamentals and types of Testing- Black Box, White Box 4.4.2 Testing process

Name and Signature of Teacher
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Name and Signature of HOD
Miss. Pallavi M. Dessai

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Semester: VI 2018-19
Paper- XIV Title- Unified Modeling Language

Name of the teacher: Miss. Nadiya Dara Patel

Programme: B.Sc. Computer Science Entire(B.C.S) III **Semester-VI**

Month- December			**Module/Unit:**	**Sub-units planned**
Lectures	Practical's	Total	Unit-I Introduction to UML	1.1 UML History 1.2 Introduction to UML 1.3 Advantages of UML 1.4 Architecture of UML 1.5 UML View 1.6 Static View: Classifiers, Relationships Associations, Generalization, Realization, Dependencies, Constraint, Instances.
16	20	36		
Month- January			**Module/Unit:**	**Sub-units planned**
Lectures	Practical's	Total	Unit II Modeling Concepts	2.1 Systems, Models, and Views 2.2 Data Types, Abstract Data Types, and Instances 2.3 Classes, Abstract Classes, and Objects 2.4 Event Classes, Events, and Messages 2.5 Object-Oriented Modelling
16	20	36	Unit III : UML Diagram-I	3.1 Use Case Diagrams: Overview, Actor, communication and relationships, Use case examples 3.2 Class Diagrams: classes and object, association and links, multiplicity, inheritance, example
Month- February			**Module/Unit:**	**Sub-units planned**
16	20	36	Unit III UML Diagram-I	3.3 State Machine Diagrams: State, Event, Composite State, transition, activity, example
			Unit IV: UML Diagram-II	4.1 Interaction Diagrams: 4.1.1 Overview 4.1.2 Sequence Diagrams: Activation, examples 4.1.3 Collaboration Diagrams: Pattern, example 4.2 Activity Diagrams: Activities, actions, decisions, control nodes, fork and join node 4.3 Component diagram: 4.3.1 Concept of component 4.3.2 Basic components in UML 4.3.3 Required interfaces of component 4.3.4 Examples

Name and Signature of Teacher
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Name and Signature of HOD
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Vivekanand College, Kolhapur (Autonomous)

Department of B.Sc. Computer Science Entire

Academic Year: 2018-19

Teaching Plan

Name of the Teacher: Mr. N. P. Mote

Programme: B.Sc. Computer Science Entire Part-I Semester- I

Subject: Electronics

Course Title: GEC-1301 A Electronics Circuits and Digital Electronics-I

Month - July			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Unit 1: Linear components in computer	Definition of active and passive elements Resistors: Classification, color code, specifications of resistors Types of resistors. Capacitors: Definition, Capacitance, capacitive reactance (XC), Charging and discharging of capacitor, Types of capacitors Inductors and Transformers
12	64	76		
Month – August			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Linear components in computer Unit 2: DC circuit analysis Practicals: 1. Positive & Negative Voltage regulators using 3 in IC's 2. Verification of Kirchhoff's Laws 3. To verify Thevenin, Norton theorem	Switches, Relays. Basic laws: Ohm's law, Kirchoff's current and voltage law Network Theorems - Thevenin's Theorem, Norton's Theorem, superposition Theorem, Maximum power transfer Theorem.
12	64	76		
Month – September			Module/Unit:	Sub-units planned
12	64	76	Unit 3: Semiconductor Diode Practicals: 4. Study forward characteristic of rectifier diode. 5. Study of CRO	Formation of P-N junction, depletion layer, internal potential barrier, working and I-V characteristics of PN junction diode. Diode applications, zener diode, Photodiode and LED
Month - October			Module/Unit:	Sub-units planned
12	64	76	Unit 4: Bipolar Junction Transistor Practicals:	Structure and working of bipolar junction transistor: CB, CC, CE configurations, CE mode characteristics, Relation between α and β, DC load line and Q point, potential divider Biasing. Concept of transistor as an

			1. Study of basic gates 2. Universal building block using NAND and NOR gates 3. Verification of De-Morgans Theorems 4. Study of Flip-Flops (D & JK) 5. Half & full adder	amplifier and transistor as a switch.

Mr. N. P. Mote

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Vivekanand College, Kolhapur (Autonomous)

Department of B.Sc. Computer Science Entire

Academic Year: 2018-19

Teaching Plan

Name of the Teacher: Mr. N. P. Mote

Programme: B.Sc. Computer Science Entire Part-I Semester- II

Subject: Electronics

Course Title: GEC-1301 A Electronics Circuits and Digital Electronics-II

Month - January			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Field Effect Transistor	Comparison between BJT and FET, classification of FETs, Structure and working of JFET, I-V characteristics and parameters (transconductance, drain resistance, amplification factor) concept of MOSFET
12	64	76	Practicals: 6. Transistors as switch (Application for LED & Relay) 7. Study of full wave rectifier with & without filter (calculation of ripple) 8. Transistor characteristics (CE) configuration	
Month – February			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	Amplifiers and Oscillators	Formation of P-N junction, depletion layer, internal potential barrier, working and I-V characteristics of PN junction diode. Diode applications, zener diode, Photodiode and LED. Structure and working of bipolar junction transistor: CB, CC
12	64	76	Practicals: 9. RC phase shift oscillator 10. Hartley Oscillator	
Month – December			Module/Unit:	Sub-units planned

VIVEKANAND COLLEGE ESTD. JUNE 1964

12	64	76	Operational Amplifier Practicals: 7. Study of astable Multivibrator circuit using IC 555 8. Study of monostable Multivibrator circuit using IC 555 9. Study of Multiplexer 10. Study of De multiplexer	Concept of operational amplifier; ideal characteristics of Opamp; Different parameters of Op Amp, Virtual ground concept, Applications of Op-amp: Inverting amplifier, Noninverting amplifier, Unity gain amplifier, Buffer, Adder, Subtractor, Integrator and Differentiator, Comparator, Schmitt Trigger.
Month - March			Module/Unit:	Sub-units planned
			Power Supply	Working of rectifier (Half, Full, Bridge);different parameters of rectifiers; filter circuits; concept of Regulator; concept of load and line regulation; Zener diode As a regulator; concept of Three pin IC regulator(Block Diagram) positive and negative voltage regulator ICs; SMPS block diagram; UPS: online and offline (block diagram)

Mr. N. P. Mote

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Vivekanand College, Kolhapur (Autonomous)

Department of B.Sc. Computer Science Entire

Academic Year: 2018-19

Teaching Plan

Name of the Teacher: Mr. N. P. Mote

Programme: B.Sc. Computer Science Entire Part-II Semester- III

Subject: Electronics Course Title: Computer Instrumentation and Computer Organization

Month : August			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	UNIT 1: MEASURMENTS, INSTRUMENTATION AND CALIBRATION	Measurements, Instrument, instrumentation, Calibration and Standards
16	64	80	Practicals: GROUP A : 1.DAC (R to 2R Ladder) 2. ADC (3 bit Flash) 3. OP-AMP Parameters. 4. Analog Multiplexers	
Month: September			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	UNIT 2: TRANSDUCERS AND SENSOR	Transducers ,Sensors Classification of transducers, Characteristics of Transducers, Temperature Transducers, Pressure Transducers, Force Transducers, Optical Transducers, Selection criterion for Transducers.
16	64	80		

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			UNIT 3: SIGNAL CONDITIONING AND DATA CONVERTORS Practicals: 5. Crystal Oscillator 6. Study of Temperature Sensor (I-V Characteristics) 7. OP-AMP Integrator and Differentiator 8. Differential Amplifier	Pre amplifiers, Filters, ADC(Dual Slope, Successive Approximation),DAC(R-2R), Study of IC ADC 0808, DAC0809, Instrumentation Amplifier using OPAMP, Differential Bridge Amplifier.
Month : October			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	UNIT 4: ACTUATORS	Definition & Principle Electrical Actuators Relay , Servomotors -AC, DC motors, Stepper motor Pneumatic Actuators Hydraulic Actuators
16	64	80		

Mr. N. P. Mote

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Vivekanand College, Kolhapur (Autonomous)

Department of B.Sc. Computer Science Entire

Academic Year: 2018-19

Teaching Plan

Name of the Teacher: Mr. N. P. Mote

Programme: B.Sc. Computer Science Entire Part-II Semester- IV

Subject: Electronics Course Title: Computer Instrumentation and Microcontroller

Month : January			Module/Unit:	Sub-units planned
Lectures	Practicals	Total	UNIT 1: DATA ACQUSITION	Introduction, Generalized Data Acquisition System, Signal conditioning for DAS, Single channel DAS, Multichannel DAS, Multiplexing, Sample and Hold Circuit, Computer based DAS, Data Logger.
16	64	80		
			Practicals: GROUP B : 1.Interfacing of DAC with Microprocessor or Microcontroller to generate triangular & Square wave 2. Arithmetic operations using 8051C(Use 8051 Simulator) 3.Logical operations using 8051C(Use 8051 Simulator) 4.Time delay generation using timers of 8051(use simulator or kit)	
Month: February			Module/Unit:	Sub-units planned

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Lectures	Practicals	Total		
16	64	80	UNIT 2: DIGITAL INSRUMENTS	Introduction, Digital Multimeters, Digital Frequency Meter, Universal Counter, Digital Tachometer, Digital pH Meter, Digital Phase Meter, Block Diagram of CRO.
			UNIT 3: MONITORS AND RECORDERS	CRT monitor, monochrome CRT, color CRT, Interlaced scanning, LCD technique. Strip chart recorder, potentiometric recorder, Bridge type recorder, X-Y recorder.
			Practicals: GROUP B : 5.Study of 8051 programmer (Load program on ROM to make LED on/off from computer) 6.Interfacing of 7-SEGMENT DISPLAY & THUMB WHEEL SHITCH with 8085 or 8051 7.Study of parallel port of PC (Port pin access using 'c') 8. Up-Down counter(74192/74193) 9.Interfacing of Relay/LED/Optocoupler using microprocessor/microcontroller	
Month : March			Module/Unit:	Sub-units planned
Lectures	Practicals	Total		
16	64	80	UNIT 4: AUTOMATIC CONTROL MECHANISM	Code division multiplexing, spread Control system, Automatic control system, Microprocessor based control system, and Microprocessor based temperature monitoring & control system, Microprocessor based speed control of DC motor.

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