

**GOVT. M. H. COLLEGE OF HOME SCIENCE &
SCIENCE FOR WOMEN (AUTONOMOUS),
JABALPUR (M.P.)**

**UG SYLLABUS
SESSION 2023-2024**



**COMPUTER APPLICATION
GENERIC ELECTIVE**

Department of Mathematics & Computers

Class	Subject	Year	Max. Marks	Min. Marks	Course Code	Course Title
B.Sc.	Computer Application	I	30+70	35	S1-COAP1G	Computer Fundamentals

Elective

Part B : Content of the Course		
Computer Fundamentals Credit Value: (4 Theory +2 Practical) = 6		
Total No. of Lectures = 60 (2 hours/Lectures per week) :2-0-0		
Unit	Topics	No. of Lectures
I	<p>Knowing computer : What is Computer, Basic Application of Computer; Components of Computer System, Modern central Processing Unit (CPU), Video Display Unit, Keyboard and Mouse, Optical Storage Devices, Basics of Hard Drive, Concepts of Hardware and Software; Concept of Computing, Data and Information; Applications of Information Electronics and Communication Technology; Connecting keyboard, mouse, monitor and printer to CPU and checking power supply.</p> <p>Computer software & its types : System software, Application software. Types of operating system, Role of operating system, Utility programs, Packages, Communication Software, commonly used application software.</p>	12
II	<p>Operating Computer using GUI Based Operating System: What is an Operating System ; Basics of popular Operating System; The User Interface, Basics of O.S. Setup; Common utilities.</p> <p>MS Windows Operating System : Definition and functions, basic components of Windows. Icons. Desktop, Taskbar, Notification Area. Files and folders, Start menu operations, my computer, network neighbourhood, recycle-bin, windows explorer, creating copying, moving and deleting files, setting wall paper, changing the mouse pointer, paint, notepad, Setting date and time, screen saver, and appearance. Using Mouse; Using right Button of the Mouse and Moving Icons on the screen, Use of Common Icons, Status Bar, Using Menu and Menu-selection, Running an Application, Viewing of File, Folders and Directories, Creating and Renaming of files and folders, Opening and closing of different Windows; Using help; Creating Short cuts, Using Windows accessories.</p>	12

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Dr. Samar Upadhyay

Dr. Geeta Shrivastava

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Dr. Binay Singh

Mr. Anurag Singh

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Dr. Vijay Khare

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Dr. S. K. Dubey

Dr. Sudipta Sanyal

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Ms. Aarti Chouksey

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Dr. Nidhi Choubey
Head of the Department

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III	<p>MS Word: Introduction, Window 2007 Interface, Customizing the Word Application, Document Views, Creating & Editing Document. Selecting, Deleting, Replacing Text, Copying text to another file. Insert, Formatting text and paragraph, Using the Font, Dialog Box, Paragraph Formatting using Bullets and Numbering in paragraphs, Checking Spelling, Line spacing, Margins, Space before and after paragraph. Basic Formatting in MS Word 2007, Advanced Formatting, Navigating through a Word Document, Performing a Mail Merge, A Quick Look at Macros, Printing Documents, Print Preview.</p> <p>Excel 2007: Introduction, Workbook, Worksheet, Formatting in Excel.</p> <p>MS PowerPoint: Introduction, Creating a Presentation.</p>	12
IV	<p>Introduction to Internet, WWW and Web Browsers : Basic of Computer networks; LAN, WAN; Concept of Internet ; Application of Internet; connecting to internet; what is ISP; Knowing the Internet; Basics of internet connectivity related troubleshooting, Web Browsing Softwares, Search Engines; Understanding URL; Domain name; IP Address; Using e-governance website.</p> <p>Basics of electronic mail; Getting an email account; Sending and receiving emails; Accessing sent emails; Using Emails; Document collaboration; Instant Messaging; Netiquettes (Internet etiquette).</p>	12
V	<p>Useful Google tools such as drive, sheet, doc, meet, etc</p> <p>Firewall, Computer Virus and Anti Virus Softwares, Internet Security & Privacy Basics of Electronic Data Interchange (EDI) and Electronic Payment System (EPS), Types of Payment System : Digital Cash, Electronic Cheque, Smart Card, Introduction to Digital Signature and Digital Certificates.</p>	12

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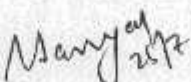
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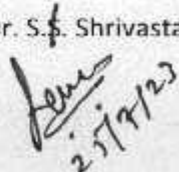


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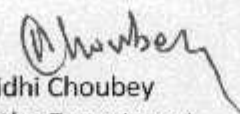


Ms. Aarti Chouksey



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Suggested Digital Platforms, web links

1. <https://edu.gcfglobal.org/en/computerbasics/>
2. <https://edu.gcfglobal.org/en/subjects/office/>
3. <https://vikaspedia.in/education/digital-literacy/it-literacy-courses-in-associating-with-msup/computer-fundamentals>
4. https://onlinecourses.swayam2.ac.in/nou20_cs03/
5. https://www.tutorialspoint.com/computer_fundamentals/index.htm
6. <https://ecomputernotes.com/e-commerce/electronic-commerce/define-electronic-payment-system-its-requirements-and-payment-methods>
7. <https://edu.gcfglobal.org/en/topics/googleapps/>
8. https://onlinecourses.swayam2.ac.in/cec19_cs06/preview
9. <https://nptel.ac.in/courses/106/106/106106092/>
10. <https://vikaspedia.in/education/digital-literacy/it-literacy-courses-in-associating-with-msup/computer-fundamentals>
11. <https://nptel.ac.in/courses/106/103/106103068/>

Suggested Readings :

- Introduction to Computers: C. Xavier, New Age International.
- Computer Fundamentals : Concepts, System & Application : Priti Sinha, Pradeep K., Sinha , BPB Publications
- Fundamentals of Information technology : Alexis Leon & Mathews Leon, Vikas Publishing House, New Delhi.
- Microsoft office 2019 for Dummies : Wallace Wang, Wiley

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Part – B Content of the Course
Computer Fundamental (Practical)

Total No. of Labs = 30 Labs each of 2 hours duration (1 Lab per week) 60hrs = 2 credit

Practical Lab will be conducted based on the theory Syllabus

List of Practical

1. Design a Greeting card using Word Art for different festivals.
2. Create your Bio-data and use page borders and shading.
3. Create a document and insert header and footer, page title etc.
4. Insert a table into the document.
5. Insert a table, picture, clip art and chart into the documents.
6. To create a document, set the margins, orientation, size, column, water mark, page color and page borders.
7. To print an invitation letter using mail merge.
8. Creating, editing, saving, printing, securing & protecting operations of an excel spreadsheets.
9. To Prepare different types of charts in Excel
10. Prepare a mark sheet of your class subjects
11. To create bar chart & pie chart in Excel for analysis of five year's results of your institute.
12. Applying themes and layouts to power point slides and inserting pictures, graphics, shapes, and tables into presentations.
13. To create power point slide make using transitions and animation, working with master slides.
14. In power point slide make use of adding transitions and animation & working with master slides.
15. To create a professional slide for presentation in power point.

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Class	Subject	Year	Max. Marks	Min. Marks	Course Code	Course Title
B.Sc.	Computer Application	I	30+70	35	S1-COAP2G	M.S. Office

Elective

Part B: Content of the Course

M.S. Office

Credit Value: (3 Theory+3Practical) = 06

Total No. of Lectures = 45 (1 hour/lecture per week) :1-0-0

Unit	Topics	No. of Lectures
I	MS Word: Introduction, Features & area of use. Working with MS Word: Ribbon tabs-Home, Insert, page Layout, References, Mailings, Review and view, Using word to create a new document, open, save and print a document, edit and format text, change the page layout, background and borders, insert headers and footers, insert and edit tables, insert clip art and pictures to documents. Formatting fonts in word, Drop cap in word, Applying Text effects, Using Character Spacing, Borders and colors, Inserting Header and Footers, Using Date and Time option in word. Creating project abstract features to be covered:- Formatting Styles, Inserting table, Bullets and Numbering, Changing Text Direction, Cell alignment, Footnote, hyperlink, Symbols, Spell Check, Track Changes.	9
II	Creating a Newsletter : Features to be covered :- Table of Content, Newspaper columns, Images from files and clipart, Drawing toolbar and Word Art, Formatting Images, Textboxes and Paragraphs. Creating a Feedback form – Features to be covered – Forms, Text Fields, Inserting objects. Mail Merge : Creating custom document, creating main document, creating data source, editing data source, opening a data source, sorting the data source, finding a record in data source, editing main document, sorting merged document, filtering merged documents, printing merged documents, merging onto letterhead, using different data sources with a single main document.	9
III	MS Excel : Introduction to Excel interface Understanding rows and columns, Naming Cells, Working with excel workbook and sheets, Formatting excel work book, New, open, Close, Save, save As. Formatting Text : Font size, Font style, font color, use the Bold, Italic, and Underline, Wrap text, Merge and Centre Currency, Accounting and other formats, Modifying Columns, Rows & Cells, perform Calculations with Functions, Creating Simple Formulas Setting up your own formula, Date and time Functions, Financial Functions Logical Functions, Lookup and Reference, Functions.	9

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	<p>Calculations – Features to be covered:- Cell Referencing, Formulae in excel – average, standard deviation, Charts, Renaming and Inserting worksheets, Hyper linking, Count function, Mathematical Functions, Statistical Function, Text Functions. Sort and Filter Data with Excel Sort and filtering data Using number filter, Text filter, Custom filtering, Removing filters from columns, Conditional formatting.</p>	
IV	<p>Create Effective Charts to Present Data Visually Inserting Columns, Pie Chart etc. Create an effective chart with chart Tool, Design, Format, and Layout options, Adding chart title, Changing layouts, chart styles, Editing chart data range, Editing data series, Protecting and sharing the work book Protecting a workbook with a password, Allow user to edit ranges, Track changes, Working with Comments. Insert Excel Objects and Charts in Word, Use Macros to Automate Tasks Creating and Recording Macros, Assigning Macros to the work sheets, Saving Macro enable workbook.</p> <p>Performance Analysis – Features to be covered :- Split cells, freeze panes, group and outline, Sorting, Boolean and logical operators, Conditional formatting Cricket Score card creation – Features to be covered:- Pivot Tables, Interactive Buttons, Importing data, Data Protection, Data Validation.</p>	9
V	<p>Creating Power Point Presentation : Making presentation which demonstrate use of Hyperlinks, Inserting – Images, Clip Art , Audio, Video, Objects, Tables and Charts</p> <p>Create Master Layout (Slide, template, and notes), Types of views (basic, presentation, slide slotter, notes etc), Inserting – Background, textures, Design Templates, Hidden slides. Auto content wizard, Slide Transition, Custom Animation, Auto Rehearsing.</p>	9

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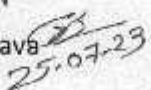


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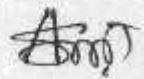
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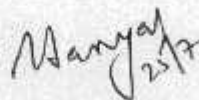
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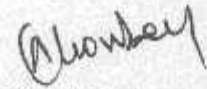
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Part C : Learning Resources

Suggested Digital Platforms, web links

1. <https://www.youtube.com/watch?v=ZvXMBb3V6A>
2. <https://www.digimat.in/nptel/courses/video/121106007/L12.html>
3. <https://www.webucator.com/how-to/how-use-mail-merge-microsoft-word.cfm>
4. <https://support.microsoft.com/en-us/office/create-pivottable-or-pivotchart-views-in-an-access-desktop-database-83e524df-dfbd-456d-9dd0-0a48c1aa6752>
5. <https://support.microsoft.com/en-us/office/create-a-pivottable-to-analyze-worksheet-data-a9a84538-bfe-40a9-a8e9-f99134456576>

Suggested Readings:

1. Microsoft Office 97 : Will Train , Gini Courter, Annette Marquis, BPB Publication.
2. MS Office 2000 for Everyone : Saxena Sanjay, S Schnd
3. Writer's Guide to Microsoft Word : Kari Holloway
4. Access 2016 Bible : Michael Alexander, Richard Kusleika
5. Excel 2019 : Greg Harvey
6. Microsoft Powerpoint Made Easy : Chris Smith

Part – B Content of the Course

MS Office (Practical)

Credit Value: 3

Total No. of Labs = 45 Labs each of 2 hours duration (1 Lab per week)

Practical Lab will be conducted based on the theory Syllabus

List of Practical

1. Create a document and apply different formatting options.
2. Design a Greeting card using Word Art for different festivals.
3. Create your Bio-data and use page borders and shading.
4. Create a document and insert header and footer, page title etc.
5. To create a document, set the margins, orientation, size, column, water mark, page color and page borders.
6. Insert a table into the document.
7. Prepare a mark sheet of your class subjects.
8. Apply the creating, editing, saving, printing securing & protecting operations to an excel spreadsheets.

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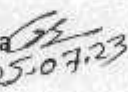
<p>9. Prepare a bar chart & pie chart for analysis of five year results of your institute.</p> <p>10. Work on the following exercise on a Workbook:</p> <ol style="list-style-type: none">Copy an existing sheetRename the old sheetInsert a new sheet into an existing workbookDelete the renamed sheet. <p>11. Prepare an Attendance sheet of 10 students for any 6 subjects of your syllabus. Calculate their total attendance, total percentage of attendance of each student & average of attendance.</p> <p>12. Create a worksheet on students list of any 4 faculties and perform following database functions on it.</p> <ol style="list-style-type: none">Sort data by NameFilter data by ClassSubtotal of no. of students by Class. <p>13. Apply themes and layouts to power point slides and insert pictures, graphics, shapes, and tables into presentations.</p> <p>14. In power point slide make use of adding transitions and animation & working with master slides.</p> <p>15. Create a excel worksheet and perform computations using available data and using mathematical functions chosen from menus.</p>	
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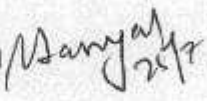
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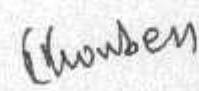
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IInd Elective ^{open}

Govt. M. H. College of Home Science & Science for Women (Autonomous) Jabalpur (M.P.)

Department of Mathematics & Computer

Session 2023 – 2024

Class	Subject	Year	Max. Marks	Min. Marks	Course Code	Course Title
B.Sc.	Computer Application	II	30+70	33	S2-COAP2G	Web Designing

Elective

Part B: Content of the Course

Web Designing

Credit Value: (4 Theory+2Practical) = 06

Total No. of Lectures = 60 (3 hour/lecture per week) : 3-0-0

Unit	Topics	No. of Lectures
I	Introduction to Internet Technology: History of the internet, internetworking concepts, architecture, and protocol: TCP/IP and others main protocols, internet address and domains. World Wide Web (WWW), Web Clients, Web Servers, Hyper Text Transfer Protocol (Http), feature of HTTP protocol, HTTP request response model, Hyper Text Transfer Protocol Secure (HTTPS), proxy server, Firewall, Search Engines.	12
II	Static Web page Development: Introduction to Hyper Text Markup Language (HTML), Elements of HTML, Basic structure of an HTML, document Head & Body Sections, inserting texts, Text alignment, using images in pages, Hyperlinks text, Forms in HTML, Backgrounds and Color controls, creating and using Tables in HTML, Creating Lists: Ordered List Tags, Unordered List Tag. Changing the Font Color; Marquee Tag.	12
III	Dynamic Web page Development: Cascading Style Sheet : CSS, Defining Style with HTML Tags, Features of Style Sheet, Style Properties, CSS Styling(Background, Text Format, Controlling Fonts), Working with Lists and Tables, Style placement: Inline style, Span & div tags, header styles.CSS Id and Class Working with block elements and objects, CSS Color.	12
IV	JavaScript Overview: JavaScript and the WWW, Script, element, Functions: Functions introduction, Calling functions, JavaScript Comments, Variables: Variables overview, declaring variables, Types of variables, Casting variables, Alert box, Prompt & confirm. Expressions: Arithmetic operators, Assignment operators, Logical operators, Expressions and precedence, Statements: If statement; for statement, while statement, Break/Continue.	12

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V	Introduction to Web Publishing: Creating the web site, Saving site, Web Hosting and publishing Concepts, Hosting considerations, Choosing Web servers, Domain name Registration, Obtaining space on Server for Web site, FTP software for upload web site. Add your website on search engines, Issues in Web site creations & Maintenance.	12
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Part -C: Learning Resources	
<p>Suggested Digital Platforms, Web links</p> <ol style="list-style-type: none"> 1. https://vikaspedia.in/education/digital-literacy/it-literacy- courses-in-associating-with-msup/web-design- fundamentals#section1 2. https://www.edx.org/learn/web-design 3. https://onlinecourses.swayam2.ac.in/ugc19 lb05/preview 4. https://sites.google.com/a/venusict.org/web-application development/ nptel-video-lectures 5. https://freevideolectures.com/course/2308/internet-technology/25 6. http://www.mphindigranthacademy.org/ <p>Suggested Readings:</p> <ol style="list-style-type: none"> 1. Wendy Willard, "HTML Beginners Guide", Tata McGraw- Hill. 2. Deitel and Goldberg, "Internet and World Wide Web, How to program", PHI 3. HTML, DHTML, JavaScript, Perl CGI by Ivan Bayross(BPB) 3rd Edition. 4. CSS By Kynn Bartlett(Pearson Education)2nd Edition 5. Introduction to Internet & HTML Scripting By Bhaumik Shroff Books India Publication 3rd Edition. 6. Books published by M.P. Hindi Granth Academy, Bhopal 	

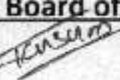
Part – B Content of the Course	
Web Designing (Practical)	
Practical Lab will be conducted based on the theory Syllabus	
<p>List of Practical</p> <ol style="list-style-type: none"> 1. Write a HTML program to design a form which should allow entering your personal data (Hint: make use of text field, password field, e-mail, lists, radio buttons, checkboxes, submit button). 2. Create a simple HTML page with title heading paragraph emphasize strong and image elements. 	

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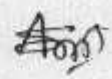
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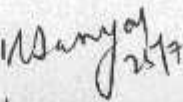
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Department of Mathematics & Computer
Session 2023 – 2024


<ol style="list-style-type: none"> 3. Write a CSS style specification rule that would make all unordered lists (tags) have square bullets and a purple background. <code>ul { list-style-type: square; background-color: purple; }</code> 4. Write a JavaScript program to calculate multiplication and division of two numbers (input from user). 5. Write a JavaScript program to find the largest of three given integers. 6. Write a JavaScript conditional statement to sort three numbers. Display an alert box to show the result. 7. Create a web page of customer profile for data entry of customer's in a Hotel, The profile should include Name, Address, Age, gender, Room Type (A/C, Non-A/C or Deluxe), Type of payment (Cash, Credit/Debit Card or Coupons). 8. Write a JavaScript function that checks whether a passed string is palindrome or not? 9. Write a java script program to find the factorial of given number. 10. Create a web page illustrating text formatting tags. 11. Create an html page with following specifications: <ol style="list-style-type: none"> a. Title should be about my college. b. Put the image in the background. c. Place your College name at the top of the page in large text followed by address in smaller size. d. Add names of courses offered each in a different color, style and typeface. e. Add scrolling text with a message of your choice. 12. Using Nested HTML tables create your Curriculum Vitae. 13. Using CSS invert the behavior of the <h1> to <h6> tags. 14. Create a sample code to illustrate the Inline style sheet for your web page. 15. Create a sample code to illustrate the External style sheet for your web page. 	
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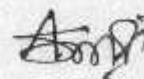
Dr. K. S. Bhatia 

Dr. Kusumlata Rajak 


Dr. Samar Upadhyay

Dr. Geeta Shrivastava 
25.07.23

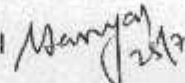
Dr. Binay Singh


Mr. Anurag Singh 


Dr. Vijay Khare

Dr. Meghna Utmal 

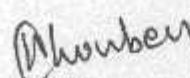
Dr. S. K. Dubey

Dr. Sudipta Sanyal 
25/7

Dr. S. S. Shrivastava 

Ms. Aarti Chouksey 

V Panthay
25/7/23


 Dr. Nidhi Choubey
 Head of the Department
 Dr. Nidhi Choubey
 Professor & Head
 Department of Mathematics
 Govt. M.H. College of Home Science
 & Science for Women, Jabalpur

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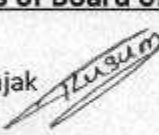
Part-C Learning Resources	
<p>Suggested Digital Platforms, Weblinks:</p> <ol style="list-style-type: none">1. https://www.w3resource.com/javascript-exercises/2. https://coding-exercises.udemy.com/html3. http://www.mphindigranthacademy.org/ <p>Suggested Readings:</p> <ol style="list-style-type: none">1. HTML, DHTML, JavaScript, Perl CGI by Ivan Bayross(BPB) 3rd Edition2. CSS By KynnBartlett (Pearson Education)2nd Edition3. Wendy Willard, "HTML Beginners Guide", Tata McGraw-Hill.4. Introduction to Internet & HTML Scripting By Bhaumik Shroff Books India Publication 3rd Edition.5. Books published by M.P. Hindi Granth Academy, Bhopal	

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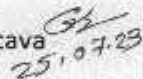


Dr. Kusumlata Rajak



Dr. Samar Upadhyay

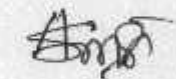
Dr. Geeta Shrivastava



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Dr. Binay Singh

Mr. Anurag Singh



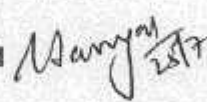
Dr. Vijay Khare

Dr. Meghna Utmal



Dr. S. K. Dubey

Dr. Sudipta Sanyal



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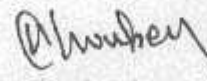
Dr. S. Shrivastava



Ms. Aarti Chouksey



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Head of the Department
Dr. Nidhi Choubey
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Department of Mathematics
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Class	Subject	Year	Max. Marks	Min. Marks	Course Code	Course Title
B.Sc.	Computer Application	II	30+70	33	S2-COAP1G	Basic Programming in C

Elective

Part B: Content of the Course

Basic Programming in C Credit Value: (4 Theory+2Practical) = 06

Total No. of Lectures = 60 (3 hour/lecture per week) : 3-0-0

Unit	Topics	No. of Lectures
I	Programming Fundamentals: Program Concept, C language: introduction, history of C, Over view of procedural programming and object oriented programming, structure of C program, Algorithms, Flow Charts Symbols, Rules for making Flow chart, Types of flowchart, techniques of problem solving: Programming Techniques Top down, Bottom up, Modular, Structured - Features, Merits & Demerits, Programming Logics- Simple Branching, Looping, Recursion, Cohesion & Coupling, Programming. Testing & Debugging & their Tools. How to compile and run a C program- steps and detailed procedure.	12
II	Programming in C including features of 'C', C tokens, Variables, Expressions, Identifiers, Keywords, Data Types, Constants, Operator: Arithmetic, Logical, Relational, Conditional and Bit wise Operators, Precedence and Associativity of Operators, evaluations of expressions, Type conversions in expressions, Basic input/output and library functions: Single character input/output i.e. getch(), getchar(), getche(), puts(); putchar() and putchar(), Formatted input output i.e. printf() and scanf().	12
III	Decision Making branching: if-else, switch, conditional operator & go to statements If statement, If....Else statement, Nesting of If....Else Statement, else if ladder, ?: operator, go to statement, Switch statement, Compound statement, Looping: Introduction, while statement, do statement, for statement, Break and Continue, do- while loops	12
IV	Functions: Utility of functions, Call by value & call by reference, categories of functions (i) Introduction (ii) User defined function and library functions, Categories of User defined functions Return values and their types, Calling a function, Void functions, Differentiating between declaration and definition of function argument/parameters in functions, Functions with variable number of arguments, recursion, Function arguments, Return values and nesting of function, Recursion, Calling of functions, Scope and life of variables local and global variable, Storage class - auto, extern, static, register.	12

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Head of the Department

Department of Mathematics

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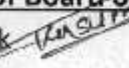
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Department of Mathematics & Computer
Session 2023 – 2024

V	<p>Arrays what is array, declaring initializing, accessing individual elements in an array, manipulating array elements using loops, 2D and 3D arrays. String: declaration, string functions – strcat, strcpy, strcmp, strlen, strstr.</p> <p>Pointers Overview of Pointers.</p> <p>Preprocessor, #define, defining functions like macros, #error,#include, conditional compilation directives i.e. #if, #else, #elif and #ifdef & undef</p> <p>Structures Structure definition, declaring and initializing Structure variables, the structure tag, period operator, accessing Structure members, Copying & Comparison of structures, the concept of structure of structure, array of structure; arrow operator and nesting of structure, Unions : initialization and use of it in a program.</p> <p>File Management: Introduction.</p>	12
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Part-C		
Learning Resources		
	<p>Suggested Digital Platforms, Web links</p> <ol style="list-style-type: none"> https://www.programiz.com/c-programming/c-if-else-statement https://javatutoring.com/control-statements-in-c/ https://www.programiz.com/c-programming/c-arrays https://www.tutorialspoint.com/cprogramming/c_structures. https://beginnersbook.com/2014/01/c-functions-examples/ https://www.javatpoint.com/data-types-in-c http://www.mphindigranthacademy.org/ <p>Suggested Readings:</p> <ol style="list-style-type: none"> The C Programming Language : B.W. Kernighan & D.M. Ritchie The Sprit of C: Cooper, Mullish Programming in ANSI-C: E. Balagurusami, TMH Publication Programming in C: Schaum Outline, McGraw-Hill Let us C: Kanetkar Y An introduction to C programming - Amit Saxena, Anamaya Publishers, New Delhi Books published by M.P. Hindi Granth Academy, Bhopal 	

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Dr. Kusumlata Rajak 

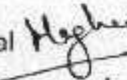
Dr. Samar Upadhyay

Dr. Geeta Shrivastava 

Dr. Binay Singh

Mr. Anurag Singh 


Dr. Vijay Khare

Dr. Meghna Utmal 

Dr. S. K. Dubey

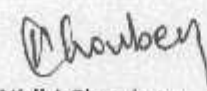
Dr. Sudipta Sanyal 

Dr. S.S. Shrivastava 

Ms. Aarti Chouksey 



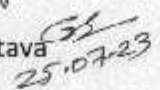
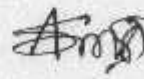

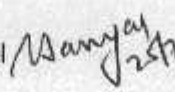


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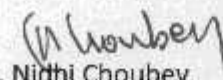

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 & Science for Women, Jabalpur

Part – B Content of the Course	
Basic Programming in 'C' (Practical)	
Total No. of Labs 30 labs each of 2 hours duration (1 lab per week)	
Practical Lab will be conducted based on the theory Syllabus	
List of Practical	
<ol style="list-style-type: none"> 1. Write a Program to print different data types in 'C' and their ranges. 2 Write a Algorithm & Flowchart to convert temperature from Celsius to Fahrenheit. 3. Write an algorithm & flowchart to find the smallest and largest number of among the three numbers. 4. Write a program to calculate simple and compound interest. 5. Write a C program to find the roots of a quadratic equation. 6. Write a C program to <u>make a simple calculator using switch...case.</u> 7. Write a C program to print natural numbers from 1 to n. 8. Write a C program to find the factorial of a given number. 9. Write a program in C to check a given number is even or odd using the function. 10. Write a C program to access elements of an <u>array</u> using pointers. 11. Write a C program to <u>calculate</u> the average of <u>array</u> elements. 12. Write a C program to <u>store</u> information of 10 students <u>using</u> structures. 13. <u>Add</u> two complex numbers by passing structures to a function. 14. Write a C program to <u>find</u> the length of a string. 15. Write a C program to reverse a string <u>using</u> recursion. 16. Write a <u>C</u> Program to find <u>largest</u> element in an <u>array</u>. 17. Write a <u>C</u> program to add two matrices using multi-dimensional arrays. 18. Write a <u>C</u> program to store information of students using structure. 19. Write a C program <u>to</u> Print <u>Pyramid</u>. 20. Write a C program <u>to</u> Print Patterns. 	

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Dr. Geeta Shrivastava  25.07.23	Dr. Binay Singh	Mr. Anurag Singh 
Dr. Vijay Khare	Dr. Meghna Utmal 	Dr. S. K. Dubey
Dr. Sudipta Sanyal  25/7/23	Dr. S.S. Shrivastava 	Ms. Aarti Chouksey 

V Pandey
25/7/23


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 Professor & Head
 Department of Mathematics
 Govt. M.H. College of Home Science
 & Science for Women, Jabalpur

	Part-C Learning Resources	
	<p>Suggested Digital Platforms, Web links</p> <ol style="list-style-type: none"> 1. https://javatutoring.com/control-statements-in-c/ 2. https://www.programiz.com/c-programming/c-arrays 3. https://www.tutorialspoint.com/cprogramming/c_structures.htm 4. https://beginnersbook.com/2014/01/c-functions-examples/ 5. https://www.javatpoint.com/data-types-in-c 6. http://www.mphindigranthacademy.org/ <p>Suggested Readings:</p> <ol style="list-style-type: none"> 1. The Sprit of C: Cooper, Mullish 2. Programming in ANSI-C: E. Balagurusami, TMH Publication 3. Programming in C: Schaum Outline, McGraw-Hill 4. Let us C: Kanetkar Y 5. An introduction to C programming - Amit Saxena, Anamaya Publishers, New Delhi 6. Books published by M.P. Hindi Granth Academy, Bhopal 	

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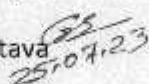


Dr. Kusumlata Rajak



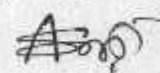
Dr. Samar Upadhyay

Dr. Geeta Shrivastava



Dr. Binay Singh

Mr. Anurag Singh



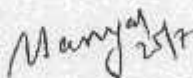
Dr. Vijay Khare

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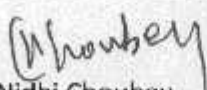
Dr. S.S. Shrivastava



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Department of Mathematics & Computer

Session 2023 – 2024

Generic Elective

Class	Subject	Year	Max. Marks	Min. Marks	Course Code	Course Title
B.Sc.	Computer Application	III	30+70	35	S3-COAP1G	Networking – A practical approach

Elective

Credit Value: (4 Theory+2Practical) = 06

Part B: Content of the Course		
Networking – A practical approach (theory)		
Total No. of Lectures = 60 (3 hour/lecture per week) : 2-0-0		
Unit	Topics	No. of Lectures
I	Networking and Internet: Overview, Communication model, Communication Tasks, Data Communication Networking: WAN, LAN, Wireless Networks Foundation of Networking Protocols: 5- layer TCP/IP Model, 7-Layer OSI Model, Internet Protocols. Switching techniques and their comparison, Modems and Internet Access Devices, Routing Devices, Router Structure.	12
II	LAN Technology: - Introduction and Services, LAN architecture, IEEE 802 standards, Ethernet (CSMA/CD): Medium Access Control, 10Mbps, 100Mbps, Gigabit Ethernet. Error- Detection and Error-Correction techniques, Link Layer Addressing, Ethernet, Interconnections: Hubs and Switches. Brief survey of other LAN systems (Token ring, FDDI, ATM, Fiber channel). Wireless LANS, Bridges, Latest trends in LAN technologies.	12
III	Routing and Internetworking: Network-Layer Routing, Least- Cost-Path algorithms, Non-Least-Cost-Path algorithms, Intra- domain Routing Protocols, Inter-domain Routing Protocols, Congestion Control at Network Layer. Logical Addressing: IPv4 Addresses, IPv6 Addresses Internet Protocol: Internetworking, IPv4, IPv6, Transition from IPv4 to IPv6.	12

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25/11/23

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Class	Subject	Year	Max. Marks	Min. Marks	Course Code	Course Title
B.Sc.	Computer Application	III	30+70	35	S3-COAP1G	Networking – A practical approach

IV	Transport and Application Layer Protocols: Client-Server and Peer-To-Peer Application Communication, Protocols on the transport layer. Transport Layer, Transmission Control Protocol (TCP), User Datagram Protocol (UDP), Mobile Transport Protocols, TCP Congestion Control. Principles of Network Applications, The Web and HTTP, File Transfer: FTP, Electronic Mail in the Internet, SNMP, Domain Name System (DNS), Socket Programming with TCP and UDP, Building a Simple Web Server.	12
V	Laboratory Work: consists of creating simulated networks and passing packets through them using different routing techniques. It has different Lab Practical related to advanced computer networks.	12

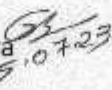
Part C: Learning Resources	
Text Books, Reference Books, Other resources	
<p>Suggested Readings:</p> <ol style="list-style-type: none"> 1. Computer Networks, Tanenbaum A. S. PHI. 2. William Stallings: Data & Communications, Sixth Edition. 3. Computer Networking: A Top-Down Approach, James F. Kurosu and Keith W. Ross, Pearson, 6th Edition, 2012 4. A Practical Guide to Advanced Networking, Jeffrey S. Beasley and Piyasat Nilkaew, Pearson, 3rd Edition, 2012 5. Computer Networks by Bhushan Trivedi, Oxford University Press. 6. मध्य प्रदेश हिन्दी ग्रंथ अकादमी की पुस्तकें। <p>Suggested Digital Platforms, Web links</p> <ol style="list-style-type: none"> 1. https://onlinecourses.swayam2.ac.in/cec19/cs07/preview 2. https://nptel.ac.in/courses/106/105/106105081/ 3. https://freevideolectures.com/course/2278/data-communication 4. https://nptel.ac.in/courses/106/105/106105183/ 5. https://nptel.ac.in/courses/106/105/106105080/ 	

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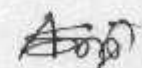
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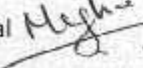
Dr. Samar Upadhyay

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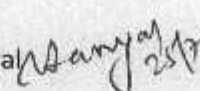
Dr. Binay Singh


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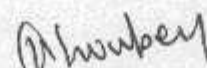
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Class	Subject	Year	Max. Marks	Min. Marks	Course Code	Course Title
B.Sc.	Computer Application	III	30+70	35	S3-COAP1G	Networking – A practical approach

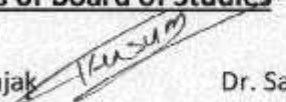
Part - B	
Content of the Course (Practical)	
Practical Lab will be conducted based on the theory Syllabus	
<p>List of Practical</p> <p>Networking (Practical oriented) Practicals:</p> <ol style="list-style-type: none"> 1. Study of Network devices in detail. 2. Study of different types of Network cables. 3. Establish and verify connectivity to the Internet. 4. Study of Network Devices in Detail. 5. Study of network IP. 6. Study of basic network command and Network configuration commands. 7. Study LAN using bus topology. 8. Study LAN using star topology. 9. Study LAN using tree topology. 10. Connect the computers in Local Area Network. 11. Study interconnections of cables for data communication. 12. Study fiber optic communication. 13. Configure hub/switch. 14. Study configures modem of computer. 15. Design TCP client and server application to transfer file. 	

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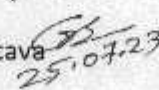


Dr. Kusumlata Rajak



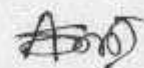
Dr. Samar Upadhyay

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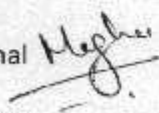
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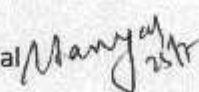
Dr. Vijay Khare

Dr. Meghna Utmal

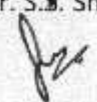


Dr. S. K. Dubey

Dr. Sudipta Sanyal



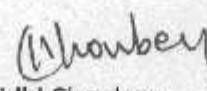
Dr. S. Shrivastava



Ms. Aarti Chouksey



V Pandey
25/7/23




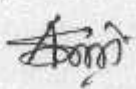

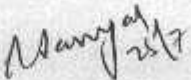



Dr. Nidhi Choubey
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Govt. M. H. College of Home Science & Science for Women (Autonomous) Jabalpur (M.P.)
Department of Mathematics & Computer
Session 2023 – 2024
Generic Elective

Class	Subject	Year	Max. Marks	Min. Marks	Course Code	Course Title
B.Sc.	Computer Application	III	30+70	35	S3-COAP1G	Networking – A practical approach

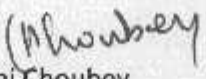
Part C: Learning Resources	
Text Books Reference Books Other resource	
<p>Suggested Readings:</p> <ol style="list-style-type: none"> 1. Computer Networks, Tanenbaum A. S. PHI. 2. William Stallings: Data & Communications, Sixth Edition. 3. Computer Networking: A Top-Down Approach, James F. Kurosu and Keith W. Ross, Pearson, 6th Edition, 2012 4. A Practical Guide to Advanced Networking, Jeffrey S. Beasley and Piyasat Nilkaew, Pearson, 3rd Edition, 2012 5. Computer Networks by Bhushan Trivedi, Oxford University Press. 6. मध्य प्रदेश हिन्दी ग्रंथ अकादमी की पुस्तकें। <p>Suggested Digital Platforms, Web links</p> <ol style="list-style-type: none"> 1. https://onlinecourses.swayam2.ac.in/cec19/cs07/preview 2. https://nptel.ac.in/courses/106/105/106105081/ 3. https://freevideolectures.com/course/2278/data-communication 4. https://nptel.ac.in/courses/106/105/106105183/ 5. https://nptel.ac.in/courses/106/105/106105080/ 	

Signature of Members of Board of Studies

Dr. K. S. Bhatia 	Dr. Kusumlata Rajak 	Dr. Samar Upadhyay
Dr. Geeta Shrivastava  25.07.23	Dr. Binay Singh	Mr. Anurag Singh 
Dr. Vijay Khare	Dr. Meghna Utmal 	Dr. S. K. Dubey
Dr. Sudipta Sanyal  25/7/23	Dr. S. S. Shrivastava 	Ms. Aarti Chouksey 

VPandey
25/7/23

Academic Council
Approved


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 Professor & Head
 Department of Mathematics
 Govt. M.H. College of Home Science
 & Science for Women, Jabalpur

only Theory - upon elective No practical

Govt. M. H. College of Home Science & Science for Women (Autonomous) Jabalpur (M.P.)

Department of Mathematics & Computer

Session 2023 - 2024

Generic Elective

Class	Subject	Year	Max. Marks	Min. Marks	Course Code	Course Title
B.Sc.	Computer Application	III	30+70	35	S3-COAP2G	E- Commerce Elective

Part B-Content of the Course		
Total No. of Lectures- 90 Tutorials-Practical (in hours per week): 3 Lectures per week		
Unit	Topics	No. of Lectures (1 Hour each)
I	Introduction Brief history of e-commerce Types Advantages & Disadvantages of e-commerce, Elements of e-commerce, Principles of e-commerce, Messaging and Information distribution, Messaging and information. distribution, Common service infrastructure, other key support layers	10
II	EDI to e-commerce: EDI - Origin, System approach and communication approach, Migration to open EDI- Approach, Benefits Mechanics E-com with WWW/Internet. E-Government Concepts, Applications of G2C, G2B, G2G	10
III	Electronic communication PC and networking, Network topologies and communication media, E-mail, OSI and TCP/IP Models, LAN, WAN, MAN Internetworking - Bridges and gateways, Internet Vs Online services, Open vs. Closed Architecture Controlled contained Vs Uncontrolled contained, Metered Pricing Vs Flat pricing Innovation Vs Control.	25
IV	www & Electronic Payment System: Applications what is web, Why is the Web such a hit, The Web and E-Com Concepts & Technology - Key concepts, Web Software development Tools. Electronic payment system Overview, Electronic or digital cash Checks, Online credit card based system Engineering financial instruments Consumer legal and Business issues.	20

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Class	Subject	Year	Max. Marks	Min. Marks	Course Code	Course Title
B.Sc.	Computer Application	III	30+70	35	S3-COAP2G	E- Commerce

V	<p>Security and Application Need of computer security, Specific intruder approaches, Security strategies, Cryptography, Public key encryption, Private key encryption, Digital signatures.</p> <p>Advertising on the internet: Marketing, Creating a publishing issues, EP architecture, EP tools, Web page EP-Baseline issues, Application tools and publishing on the internet.</p>	25
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Part C-Learning Resources		
Text Books, Reference Books, Other resources		
	<p>Suggested Readings:</p> <ol style="list-style-type: none"> 1. Electronic Commerce" By Ravi Kalakota and Andrew B. Whinston. 2. Web Commerce Technologies Handbok "By Daniel Minoli & Emma Minoli 3. E-Commerce" By Dr. Varinder Bhatia 4. Promise Of E-Governance" By MP Gupta 5. मध्य प्रदेश हिन्दी ग्रंथ अकादमी की पुस्तकें। <p>Suggestive digital platforms/ web links</p> <ol style="list-style-type: none"> 1. https://onlinecourses.nptel.ac.in/noc_19_mg54/preview 2. https://onlinecourses.swayam2.ac.in/cec19_cm01/preview 3. https://www.coursera.org/lecture/innovative-entrepreneur/e-commerce-the-internet-as-a-selling-platform-DYSNa 4. https://www.mooc-list.com/tags/e-commerce-market 5. https://onlinecourses.swayam2.ac.in/nou21_cm14/preview <p>Suggested equivalent online courses:</p> <ol style="list-style-type: none"> 1. https://www.udemy.com 2. https://www.coursera.org/professional-certificates 3. https://www.edx.org/learn/ecommerce 4. https://www.coursera.org/courses?query=e-commerce 	

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V.Purohey
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