(An Autonomous College affiliated to Barkatullah University, Bhopal) (NAAC Accredited 'A' Grade)



SYLLABUS



SESSION-2022-23

Course Type: Certificate Course

MS Office

PRINCIPAL Sri Sathya Sai College For Women, Bhopal (M.P.)

(An Autonomous College Affiliated to Barkatullah University Bhopal) Department of Higher Education, Govt. of M.P. Under Graduate Syllabus (Annual Pattern) As recommended by Central Board of Studies and approved by the Governor of M. P.

wef 2021-2022

(Session 2022-23) (NEP-2020)

Class / कक्षा Year / वर्ष Course Title / पाठ्यक्रम का शीर्षक Course Type / पाठ्यक्रम का प्रकार Credit Value/ क्रेडिट मान

Max. Mark/ अधिकतम अंक

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UG I - Year M.S. Office Generic Elective 4 Credits

Max.Marks: 30+70

Min. Passing Marks: 35

Course Learning Outcomes(CLO)

On the completion of this course student will be able-

To Create and manage professional documents using word. 1.

Analyze, manage and present data using excel. 2.

Create and manage presentation using power point. 3.

To insert a table, picture, or drawing into the document. 4.

To prepare the document to be sent as a circular letter.

Particular

MS. Word: Introduction, Feature & area of use. Working with MS Word: Ribbon tabs-Homes, Insert, Page Unit-I Layout, Reference, 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 Footer, Using Data 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. Creating a Newsletter: Features to be Covered:- Table of Content, Newspaper columns, Image from files and Unit-II 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. Crating data source, editing data source, Opening a data source, sorting the data source, finding a record in data sources, editing main document, sorting merged documents, filtering merged documents, printing merged documents, Merging onto) letterhead, using different data sources with a single main document

MS EXCEL : Introduction to excel interface understanding rows and columns, Naming cells, Working with Unit-III 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

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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, Funcitons. 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 Functions, 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. Create Effective charts to Present Data Visually inserting Column, Pie chart etc. Create an effective chart Unit-IV with Chart Tool, Design, Format, and Layout options, Adding chart title, Changing layouts, Chart Styles, Editing chart data rang 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 enabled workbook. 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 Creating PowerPoint Presentations: Making Presentation which demonstrate use of Hyperlinks, Inserting -Unit-V Images Clip Art, Audio Video, Objects Table and Charts. Create Master Layouts (Slide, Template, and notes), Types of View (basic, Presentation, Slide Slotter, notes etc,) Inserting - Background, textures, Design Templates, Hiddent slide, Auto Content Wizard, Slide Transition, Custom Animation, Auto Rehearsing

Suggested Books:-

1	Microsoft Office 97	Will Train,Gini	BPB Publication
		Courter, Annette	
		Marquis	
2	MS Office 2000 for Everyone:		
3	Writter's Guide to Microsoft Word :	Kari Holloway	
4	Access 2016 Bible:	Michael Alexander, Richard Kuselikha	
5	Excel 2019 :	Greg Harvey	

Suggested Digital Platforms, Web Links

1. https://www.youtube.com/watch?v=Zv3XMBb3V6A

2. http://www.digimat.in/nptel/courses/video/121106007/L12.html

3. https://www.webucator.com/how-to/how-use-mail-merge-microsoft word. cfm

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Suggested Continuous Evaluation Methods:

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Suggested Continuous Evaluation Methods: Maximum Marks:100				
Continuous Comprehensive Evaluation (CCE): 30 marks External Exam (EE) 70 Marks				
Internal Assessment: आंतरिक				
मूल्यांकन	क्लास टेस्ट असाइनमेंट / प्रस्तुतीकरण	Total = 30		
Continuous Comprehensive		×		
Evaluation (CCE): 30 सतत				
व्यापक मूल्यांकन		-		
	Section (A)			
External Assessment:	(a) Objective types Questions (5 questions 1	05x01 = 05		
	mark each) वैकलपिक प्रश्न			
External Exam Section: 70	(b) Very Short answer type Questions (50	05x01 = 05		
Time: 02.00 Hours	word Each) (5 questions 1 mark each) अति लघु			
	प्रश्न	× .		
	Section (B)	$04 \ge 06 = 24$		
	(a) Short answer type Questions (250 word			
2	Each) 4 to be attempted out of 7 given			
	questions			
	(4 questions 6 mark each) लघु उत्तरीय			
	प्रश्न	04x9 = 36		
	Section (C):			
	Long answer type Questions (500 word Each)	Total = 70		
	दीर्घ उत्तरीय प्रश्न			
	(4 to be attempted out of 7 given questions)			
	(4 questions 9 marks each)			

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(An Autonomous College Affiliated to Barkatullah University Bhopal) Department of Higher Education, Govt. of M.P.

Under Graduate Syllabus (Annual Pattern)

As recommended by Central Board of Studies and approved by the Governor of M. P.

wef 2021-2022 (Session 2022-23) (NEP-2020)

Class / कक्षा Year / वर्ष Course Title / पात्यक्रम का शीर्षक Course Type / पात्यक्रम का प्रकार Credit Value/ क्रेडिट मान UG I - Year MS Office (Practical) Generic Elective 2 Credits

Max. Mark/ अधिकतम अंक

Max.Marks: 30+70

Min. Passing Marks: 35

On the completion of this course student will be able.

- 1. To use keyboard shortcuts to performs tasks.
- 2. To create a new document, open, save and print a document.
- 3. To edit and format text, change the page layout, background and borders.
- 4. To modify power point custom template presentation.
- 5. To insert clip art and pictures to documents.
- 6. To navigate the start menu to locate programs. Files, and setting & Create files and folders.

To create a word document with customized template.

Particular

List of Practical

1. Create a document and apply different formatting options.

2. Design a Greeting Card using Word Art for different festivals.

3. Creative your Bio-data and use page borders and shading.

4. Creative 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.

- 1. Prepare a mark sheet of your class subjects.
- 2. Apply the creating, editing, saving, printing securing & protecting operations to an excel spreadsheets.
- 3. Prepare a bar chart & pie chart for analysis of five year results of your institute.
- 4. Work on the following exercise on a workbook:
 - a. Copy an existing Sheet
 - b. Rename the old Sheet
 - c. Insert a new Sheet into an existing Workbook
 - d. Delete the renamed Sheet.

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- 5. 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.
- 6. Create a worksheet on Students list of any 4 faculties and perform following database functions on it.
- a. Sort data by Name
- b. Filter data by Class
- c. Subtotal of no.of students by Class.
- 7. Apply themes and layouts to power point slides and insert pictures. Graphics, shapes, and tables into presentation.

8. In power point slide make use of adding transitions and animation & Working with master Slides. Create a excel worksheet and perform computations using available data and using mathematical functions chosen from menus.

Suggested Digital Platforms, Web links

- 1. https://www.youtube.com/watch?v=Zv3×MBb3V6A
- 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-9ddo-
- 5. https://support.microsoft.com/en-us/office/create-a-pivottable-to-analyze-worksheet-data-a9a84538-bfe9-40a9-a8e9-f99134456576

Suggested Books:-

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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	

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ggested Continuous Evaluation	Maximum Marks :100	
Internal Assessment :	Class Interaction /Quiz	Total 30
	Attendance	
	Assignments (Charts/ Model Seminar / Rural Service/ Technology Dissemination/ Report of Excursion/ Lab Visits/ Survey / Industrial visit)	
External Assessment :	Viva Voce on Practical	Total 70
	Practical Record File Table work / Experiments	

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SYLLABUS UG SESSION- 2022-23 Course Type: Certificate Course Medicinal Plants

PRINCIPAL Sri Sathya Sai College For Women, Bhopal (M.P.)

(An Autonomous College Affiliated to Barkatullah University Bhopal) Department of Higher Education, Govt. of M.P. Under Graduate Syllabus (Annual Pattern)

As recommended by Central Board of Studies and approved by the Governor of M. P.

wef 2022-2023 (Session 2022-23) (NEP-2020)

Class/ कक्षा:B.Sc.Year /वर्ष:First/प्रथमSubject/विषय:Vocational / Certificate CourseTitle /शीर्षक:Medicinal PlantsMax. marks:30+70=100Credit Value:4Course Learning Outcomes (CLO)

After Studying this course, the students will be able to understand:

• The utility of plants as medicines.

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- The preparation of basic herbal medicinal products.
- The idea of cultivation practices.
- The storage, packaging and marketing of herbal medicines.
- To work with individual plant and plant products.

Particulars

Unit - I	General aspects of Medicinal plants
	1.1 Definition, History, present and future needs.
	1.2 Introduction of plant parts (fruits, leaves, roots, stem, seeds and their
	modifications).
	1.3 Cultivation and harvesting practices.
	1.4 Processing and storage practices.
	1.5 Marketing of medicinal products.
	1.6 Role in human health and balanced diet.
	1.7 Basic idea of quality control and contribution of national research
	laboratories like CDRI, CIMAP, NBRI etc.
	1.8 Precautions during use of herbal medicinal products.
इकाई 1	औषधीय पादपों की सामान्य जानकारी
	1. परिभाषाए इतिहास व वर्तमान तथा भविष्य की आवश्यकताएं।
	2. पादप. अंगों का परिचय (फल, जड़, तना, पत्ती, बीज और उनके रूपान्तरण)
	3. खेती और कटाई की प्रक्रिया
	4. प्रसंस्करण व भंडारण प्रक्रिया
	5. औषधीय उत्पादों का विपणन्
	 मानव स्वास्थ्य व संतुलित आहार में सुविधा

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	7. गुणवत्ता नियंत्रण का आधारभूत विचार व राष्ट्रीय अनुसंधान प्रयोगशालाओं जैसे सी.टी.
	आर.आई, सी., मेप, एन.बी.आर.आई. का योगदान
	8. हर्बल औषधीय उत्पादों के प्रयोग के दौरान सावधानियाँ
Unit –	Important Indian Medicinal Plants (Part – 01)
II	1.1 Plants parts used as powder: Identification and utilization of Amla (Embellica
	officinalis), Bahera (Terminalia bellerica), Harad (Terminalia chebulla), Turmeric
	(Curcuma longa), Garlic (Allium sativum), Bitter guard (Momordica charantia). Black
	plum (Syzygium cumini), Fenugreek (Trigonella foenum- graecum), Cinnamon
	(Cinnamomum verum), Sarpgandha (Raulfia serpentina), Black pepper (Piper nigram),
	Ashwagandha (Withania sominifera), Psyllium husk (Plantago ovata).
	1.2 Plant parts used as juice/decoction: Identification and utilization of Amla (<i>Embellica</i>
*	officinalis), Ginger (Zingiber officinale), Onion (Allium cepa), Bottle gourd (Lagenaria
	siceraria), Basil (Oscimum sanctum), Arjun (Terminalia arjuna), Neem (Azadirachta
	<i>indica</i>), Gwarpatha (<i>Aloe vera</i>), Brahmi (<i>Bacopa monnieri</i>), Giloy (<i>Tinospora cordifolia</i>),
	Shankhpushpi (Convolvulus prostrate), Bael (Aegle marmelos).
इकाई 2	महत्वपूर्ण औषधियुक्त भारतीय पादप (भाग–01)
	1. चूर्ण के रूप में पादप—अंगों का उपयोगः आंवला(एम्बेलिका ऑफिसिनैसिस), बहेडा (टर्मिपेलिया
	बेलेरिका), हरड़ (टर्मिनेलिया चेबुला), हल्दी (कुरकुमा लोंगा), लहसुन (एलियम सटाईवम),
	करेला (मोमोर्डिका केरेंशिया), जामुन (साइजाईजियम क्यूमिनी), मैथी (ट्राईगोनेला
	फीनम-ग्रीकम), दालचीनी (सिनामोमम वेरम), सर्पगंधा (राउल्फिया सपेंटाईना), कालीमिर्च
	(पाईपर नाईग्रम), अश्वगंधा (विथेनिया सोमिनीफेरा), इसबगोल भूसी (प्लांटेगो आबेटा) और
	बेल (एगल मार्मेलोस) की पहचान और उपयोग।
	2. रस/काढ़े के रूप में पादप-अंगों का उपयोगः आंवला(एम्बेलिका ऑफिसिनैसिस), अदरक
	(जिजिबर ऑफिसिनेल), प्याज (एलियम सेपा), लौकी (लेजेनेरिया सिसेरिया), तुलसी (ऑसीमम
e ¹	सेक्टम), अर्जुन (टर्मिनेलिया अर्जुना), नीम (एजाडिरेक्टा इंडिका), ग्वारपाठा (एलोबेरा), ब्राह्मी
	(बकोपा मोननेरी), गिलोय (टिनोस्पोरा कॉर्डिफोलिया) और शंखपुष्पी(कॉनवोल्बुलस प्रोस्ट्रेट्स)
	की पहचान व उपयोग।
Unit -	Important Indian Medicinal Plants (Part-02)
III	1.1 Plants parts used as lotion/ointment: Identification and utilization of Gwarpatha
	(Aloe vera), Fenugreek (Trigonella foenum- graecum), Pot marigold (Calendula
	officinalis), Neem (<i>Azadirachta indica</i>).
	1.2 Plant parts used as oil: Clove (Syzygium aromaticum), Neem (Azadirachta indica).
	Coconut (Coccus nucifera), Nilgiri (Eucalyptus Sp.). 1.3 Plant parts used as surgical fibre, sutures and dressings: Identification and
	utilization of Cotton (Gossypium Sp.), Jute (Corchorus capsularis). Banana (Musa sp.).
	1.4 Plant parts used as poultice: Identification and utilization of Turmeric (<i>Curcuma</i>
	longa), Nilgiri (Eucalyptus sp.), Ginger (Zingiber officinale), Garlic (Allium sativum),
	Onion (Allium cepa), Dhatura (Datura sp.), Aak (Calotropis sp.), Arandi (Ricinus
	communis).
इकाई 3	महत्वपूर्ण औषधियुक्त भारतीय पादप (भाग–02)
, . .	1. लोशन व मरहम के रूप में पादप–अंगों का उपयोगः ग्वारपाठा (एलोबेरा), मैथी (ट्राईगोनेला
	फीनम–ग्रीकम), मैरीगोल्ड (कैलेंडुला ऑफिसिनैलिस), नीम (एजाडिरेक्टा इंडिका) की पहचान और
	उपयोग।
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1	 तेल के रूप में पादप-अगों का उपयोगः लोंग (साईजाईजियम एरोमैटिकम), नीम (एजाडिरेक्टा इंडिका), नारियल (फोकस न्यूमीफेरा), युकेलिप्टस (यूकेलिप्टस प्रजाति) की पहचान और उपयोग। सर्जिकल तंतु, टाँके व ड्रेसिंग के रूप में पादप-अगो का उपयोगः कपास (गॉसिपियम प्रजाति), जूट (कारकोरस कैप्सुलेरिस), केला (म्युसा प्रजाति) की पहचान और उपयोग। पुल्टिस के रूप में पादप-अगों का उपयोगः हल्दी (कुरकुमा लोंगा), युकेलिप्टस (यूकेलिप्टस (यूकेलिप्टस (यूकेलिप्टस प्रजाति), जूट (कारकोरस कैप्सुलेरिस), केला (म्युसा प्रजाति) की पहचान और उपयोग। पुल्टिस के रूप में पादप-अगों का उपयोगः हल्दी (कुरकुमा लोंगा), युकेलिप्टस (यूकेलिप्टस प्रजाति), अदरक (जिजिबर ऑफिसिनेल), लहसुन (एलियम सटाईवम), प्याज (एलियम सेपा), धतूरा (धतूरा प्रजाति), आक (केलोट्रोपिस प्रजाति) और अरंडी (रिसिनस कम्युनिस) की पहचान और उपयोग। Practical Identification of locally available common medicinal plants. Basic preparations of herbal products as Kadha, Powder (e.g. neem leaf, moringa leaf.
	 tulsi leaf, giloy, anardana), Juice (e.g. Amla, Aloe vera), Trifla, Chyavanprash, Amla candy, Herbal tea etc. 3^o Study and documentation of commercial production of at least 5 medicinal plants. (Using websites/ YouTube).
	 Submission of digital photo album of at least 10 medicinal plants with brief description, Study of basic tools/instruments/apparatus used in making herbal medicines. Cultivation, maintenance and reporting of at least 5 medicinal plants within college campus. Educational visit to herbal medicine factory/small processing unit/medicina agriculture field and submission of project report. (At least 01)
1	प्रायोगिक पाठ्यक्रम 1. स्थानीय उपलब्ध सामान्य औषधीय पादपों की पहचान 2. हर्बल उत्पाद जैसे काढ़ा, चूर्ण (जैसे नीम पत्ती, मुनगा पत्ती, गिलोय, अनारदाना) रस (जैसे आवला, ग्वारापाठा), त्रिफला, च्यवनप्राश आंवला केडी व हर्बल चाय को तैयार करने की प्रक्रिया। 3- कम से कम 05 औषधीय पादपों के व्यावसायिक उत्पादों का अध्ययन और अभिलेख प्रस्तुतिकरण।

Suggested Readings:

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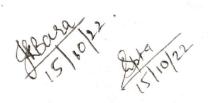
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- 1. Panda H., Hand Book on Ayurvedic Medicines, National Institute of Industrial Research, Delhi 7
- 2. CSIR- Cultivation and Utilization of Medicinal Plants.
- 3. Bramhvarchas, Ayurved ka pran; Vanooshdhiigya, Vedmata Gayatri Trust, Shntikunj Haridwar, 2004
- 4. Chaudhry R.D., Herbal Drug Industry, Eastern Publication
- 5. Atal and Kapur, Cultivation and Utilization of Medicinal Plants, RRL Jammu Tawi, 1982
- 6. Raphel Ikan, Natural Products; A Lab Guide, Academic Press, 1991, 2nd edition.
- 7. Dutt Ashwin, An Introduction to Medicinal Plants, Adhyayan Publishers and Distributers, 2009, 1st edition.

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(An Autonomous College affiliated to Barkatullah University, Bhopal) (NAAC Accredited 'A' Grade)



SYLLABUS

UG

SESSION-2022-23

Course Type: Certificate Course

ICT Skills

Sn Satnya Sai College For Women, Bhopal (M.P.)

(An Autonomous College Affiliated to Barkatullah University Bhopal) Department of Higher Education, Govt. of M.P. Under Graduate Syllabus (Annual Pattern)

As recommended by Central Board of Studies and approved by the Governor of M. P.

wef 2021-2022

(Session 2022-23)

(NEP-2020)

Course Type

Course Title Credit Value Total Marks Course Learning Dutcomes(CLO) Additional Course UG I & II Year Certificate Course UG III PG I & II Year ICT Skills 2 Credits Max. Marks: 100 Min Passing Marks: 35 After completing the course, student will be able to –

- Get an understanding of the basic components, use and application of different ICT systems and networks
- Understand the impact of current and new technologies on methods of working in the outside world
- Function as discerning students in an increasingly digital society
- Access various tools and applications for learning and skill development opportunities
- Operate a variety of hardware and software independently and troubleshoot common problems and using the ICT facility with care, ensuring the safety of themselves, others and the equipment
- Practice safe, legal and ethical means of using ICT

Topics

Unit I:

ICT - Introduction, Objectives, Evolution, Purpose (Connecting with the World • Connecting with each other • Creating with ICT • Interacting with ICT), Usefulness, Applications, Types of ICT, Creating textual communication, visual communication, audio-video communication. **ICT application areas in everyday life** - E-Commerce, E-governance, Banking, Agriculture, Education, Medicine, Defense, Transport, Publicity, Manufacturing, Finance, Travel & Leisure, Libraries, Expert Systems, Retail

Advantages of ICT in everyday life, Disadvantages of ICT

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Computers, Data Storage and Peripherals: Types and classification of computers,

Block diagram of computer, C.P.U., registers, system bus, main memory unit, RAM, ROM cache memory, Primary, secondary, auxiliary memory, hard disks, pen drive, optical disks, Inside a computer - SMPS, Motherboard, Ports and Interfaces, expansion cards, ribbon cables,

memory chips, different processors and clock speed.

Unit II:

Input Devices: Characteristics, uses, advantages and disadvantages of input devices including: keyboard, numeric keypad, pointing devices, remote control, joystick/driving wheel, touch screen (as an input device), scanners,

camera, microphone, sensors, light pen

Output Devices: Characteristics, uses, advantages and disadvantages of output devices including monitors, touch screen (as an output device), multimedia projector, laser printer, inkjet printer, dot matrix printer, plotter, 3D printers, speaker, actuator

Memory - definition of computer memory, its types – primary and secondary memory, RAM, ROM, EPROM, Cache, Registers.

Storage devices: Magnetic tapes, Floppy Disks, Hard Disks and its types – PATA, SATA, SCSI, SSD, NVM Express etc., Compact Disc – CD-ROM, CD-RW, VCD, DVD, DVD-RW, usb drives, Blue Ray Disc, SD/MMC Memory cards, Zip Drive, Formatting & Scanning a HD, Partitioning a HD.

Unit III:

Computer Software: What is Software? Relationship between Hardware and software, Types of Software: system software, Application Software, Firmware, Role of System Software, Types of system Software: Operating Systems, Language Translator, Utility Programs, Communication software, Commonly used Application Software, Database, Graphics, Education, Entertainment Software, Mobile App Software, Social Media Software: Instant Messaging, Email, Chat Bot, Web Blogs.

Free Open Source Software (FOSS).

Application Software and their uses - Word Processing, Spreadsheet, Presentation, Database, Graphics, Designing, Recording sound and video, newsletters, posters, websites, multimedia presentations, audio, video, media streaming and E-publications, blog, forum, wiki, social networking.

Using office tools - any of MS-Office/ Libre Office,

Google Workplace – Google Docs, Sheets, Meet, Drive, Zoho Mail, WPS Office, OfficeSuite, Polaris Office, OnlyOffice Docs, WordPerfect etc.

Utility Software - PDF Creator, File Archiving, File Converter

Collaboration tools – Docs, Chat, forum, wiki, online groups, audio/video conferencing, social bookmarking and social networking, Web Conferencing.

Unit IV:

Managing files - Locate stored files, Open and import files of different types, Save files in a planned hierarchical directory/folder structure, Save files using appropriate file names

Save and print files in a variety of formats including a document, screenshots, database reports, data tables, graphs/charts, a web page in browser view, a web page in HTML view Save and export in the file format of an application package including .docx, .doc, .xlsx, .xls, .sdb, .sdc, .accdb .odb, .rtf, .pptx, .ppt, Save and export in a generic file format including .csv, .txt, .rtf, .pdf, .css, .htm, .jpg, .png

File formats - Characteristics and uses of file formats including css, csv, gif, htm, jpg, pdf, png, rtf, txt, zip, rarcsv, gif, htm, jpg, pdf, png, rtf, txt, zip, rar



Compress files - Reduce file sizes for storage or transmission where necessary using file compression including .zip, .rar

File compression - The need to reduce file sizes for storage or transfer

Unit V:

Use of computer network: Access to information, person to person communication, electronic commerce, internet of things.

Types of computer network: Broadband access network, Mobile and wireless network, content provider network, transit network, enterprise network.

Mobile communication - SMS messaging, phone calls, Voice over

Internet Protocol (VoIP), video calls

The Internet - WWW, Browser, Search Engine, Uses of the Internet, Basic Services of Internet, advantages and disadvantages of using the internet, differences between internet, intranet and extranet, Difference between website and portal.

Internet Service Provider (ISP), structure of a web address, Uniform Resource Locator (URL), hyperlink, web browser. Use of search engine including speed of searching, amount of information, the speed of finding relevant information, ease of finding reliable information.

Cloud computing - The characteristics, uses and issues relating to cloud computing. How data is stored, managed, and shared using cloud computing

Advantages and disadvantages of using cloud storage methods.

Suggestive List of Practicals				
	Hardware Lab			
	 Prepare a list of various computer peripherals. (e.g. CPU, Mother Board, RAM, Hard Drive, Optical Drive, Solid State Drive, Monitor, Keyboard, Mouse, Speaker, Web cam, Printer, Scanner, microphone, speakers, modem, projector etc). Identify common ports, associated cables, and their connectors. Observe various connectors, ports back and front side of the computer. Write their purpose and specifications. (e.g. Power, PS/2 keyboard and mouse, Serial and parallel, USB, VGA, LAN, Audio & microphone, Firewire, HDMI, games, SATA etc.) MS Office 			
	Create a document and apply different formatting options.			
	 Design a Greeting Card using word art and smart arts for different festivals. Create a document and insert header and footer, page title, borders and shading etc. Create a document, set the margins, orientation, size, Column, Water mark, page, color and page borders etc. 			
)	 Insert a table into the document. Prepare a mark sheet of your class subjects. Apply the creating, editing, saving, printing securing & protecting operations to an excel spreadsheets. 			
	 Prepare a bar chart & pie chart for analysis of five year results of your institute. Work on the following exercise on a workbook: 			
	a. Copy an existing Sheetb. Rename the old Sheet			
	c. Insert a new Sheet into an existing Workbookd. Delete the renamed Sheet.			
	8. 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, if formulae for calculating grade based on percentage.			
	 9. Create a worksheet on Students list of any 4 faculties and perform following database functions on it. a. Sort data by Name b. Filter data by Class 			
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- c. Subtotal of no. of students by Class.
- 10. Apply themes and layouts to power point slides and insert pictures. Graphics, shapes, and tables into presentation.
- 11. In power point slide make use of adding transitions and animation & Working with master Slides. File/ Folder Management
- 1. Create folder(s) and file(s) using different ways.
- 2. Apply different types of copy/cut/paste options.
- 3. Managing the desktop icons, screen resolution and backgrounds.
- 4. Making shortcuts to your files/folders on desktop.
- 5. Compress a folder and mail it to yourself.
- 6. Extract a zipped file to a folder in E drive.
- 7. Convert doc to pdf and pdf to jpg.

Collaborative online working

- 1. Host a meeting on zoom/google meet, share the screen/pdf/documents, use board/annotations.
- 2. Host a meeting on google meet, and record it on zoom.
- 3. Create a google sheet, share it with 6 more participants and work simultaneously.
- 4. Create a google doc, apply different types of formatting.
- 5. Create a google form for youth festival to input their name, class, contact number and event participated and save the data to a google sheet.

Create a google slide to make certificate for different names in the above program using autocrat.

Learning Resources

Textbooks, Reference Books, Other Resources

Suggested Readings:

- Sinha P.K., Sinha Priti, "Computer Fundamentals", BPB, 2020, 8th Edition
- Alexis Leon & Mathews Leon "A Beginners Guide to Computers", Vikas Publishing House Pvt. Ltd., 2001.
- Mohan P., " Fundamentals of Computers", Himalaya Publishing House, 2010, Revised Edition,
- Sukhwinder Singh, Gaurav Kumar, kanwal Preet, "ICT Skill Development", Twentyfirst Century Publications, 2014
- Working in Microsoft Office, Ron Mansfield, Tata Mc. Graw Hill Publishing Company Limited.
- Learning Computer Fundamentals, Ms Office and Internet & Web Tech., Dinesh Maidasani, Laxmi Publication.
- G Suite for Dummies, Paul McFedries, Wiley

Internal Assessment and Evaluation

Practical Exam & Viva : 100 Marks

Any remarks/suggestions: Focus of the Course/Lab practicals should be on developing ability of the student in acquiring expertise through hands on practice.

Ahal Mathigan

(An Autonomous College affiliated to Barkatullah University, Bhopal) (NAAC Accredited 'A' Grade)



SYLLABUS

UG

SESSION-2022-23

Course Type: Certificate Course

Web Designing

PRINCIPAL Sri Sathya Sai College For Women, Bhopal (M.P.)

(An Autonomous College Affiliated to Barkatullah University Bhopal) Department of Higher Education, Govt. of M.P. Under Graduate Syllabus (Annual Pattern)

As recommended by Central Board of Studies and approved by the Governor of M. P.

wef 2021-2022 (Session 2022-23) (NEP-2020)

Class / कक्षा Year / वर्ष Course Title / पाठ्यक्रम का शीर्षक Course Type / पाठ्यक्रम का प्रकार Credit Value/ क्रेडिट मान Max. Mark/ अधिकतम अंक

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UG I Year Web Designing Vocational 4 Max. Marks: 100

Min. Marks: 35

70+30.

After studying this Course the student will be able to - Theory: - 70 marks

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- Code a handful of useful HTML & CSSexamples
- Build semantic, HTML & CSS webpage
- Write basic scripts
- Use Names, Objects, and Methods
- Add Interactivity to a Web Page

Create Dynamic Web Pages using Java Script in HTML forms.

Expected Job Role / Career opportunities Job Role - Web Designer / Front End Developer/ Creative Ad Designer

Job Description –Web designers develop functional and appealing web pages, websites, web applications, online advertisements for individuals, businesses and government agencies to establish their online presence. They use knowledge of computer programming and graphic design to create websites that meet client needs.

Career Opportunities -

Typical employers of web designers are -

- 1. Software companies
- 2. IT consultancies
- 3. Specialist web design companies
- 4. Large corporate organisations
- 5. Any organisation that uses computer systems
- 6. Self-employment/freelance work is often possible for individuals with appropriate experience.
- 7. Vacancies are advertised online, by career services and by recruitment agencies.

Mathijani Ahde



	Particular
Unit-I	Introduction to Internet- World Wide Web, Internet Addressing, Browser, URL, Web server, website, homepage, Domain Name. Basic concepts.
	Softwares for Web Designing- Notepad/Notepad++, Dreamweaver, Blue Griffon, Net beans, Sea Monkey, Word press, Sublime.
	Introduction to HTML : HTML Tags and Attributes, HTML Basic Tags, Formatting Tags, HTML Color Coding, Div and Span Tags for Grouping.
	Lists: Unordered Lists, Ordered Lists, Definition list. Images: Image and Image Mapping
	Hyperlink : URL - Uniform Resource Locator, URL Encoding. Table: , , , , <caption>, <thead>, , <tfoot>, <colgroup>, <col/>. Attributes Using Iframe as the Target</colgroup></tfoot></thead></caption>
	Form: <input/> , <textarea>, <button>, <select>, <label></td></tr><tr><td></td><td>Headers: Title, Base, Link, Styles, Script</td></tr><tr><td></td><td>HTML Meta Tag, XHTML, HTML Deprecated Tags & Attributes</td></tr><tr><td>Unit-II</td><td>CSS: Introduction, Features and benefits of CSS, CSS Syntax, External Style Sheet using <link>, Multiple Style Sheets, Value Lengths and Percentages.</td></tr><tr><td></td><td>Selectors: ID Selectors, Class Selectors, Grouping Selectors, Universal Selector, Descendant / Chila Selectors, Attribute Selectors, CSS – Pseudo Classes.</td></tr><tr><td></td><td>Color Background Cursor: background-image, background-repeat, background-position, CSS Cursor</td></tr><tr><td></td><td>Text Fonts: color, background-color, text-decoration, text-align, vertical-align, text-indent, text-transform, white-space, letter-spacing, word-spacing, line-height, font-family, font-size, font-style, font-variant, font-weight.</td></tr><tr><td>Unit-III</td><td>Lists Tables: list-style-type, list-style-position, list-style-image, list-style, CSS Tables (border, width & height, text-align, vertical-align, padding, color)</td></tr><tr><td></td><td>Box Model: Borders & Outline, Margin & Padding, Height and width, CSS Dimensions.</td></tr><tr><td>1</td><td>Display Positioning: CSS Visibility, CSS Display, CSS Scrollbars, CSS Positioning (Static Positioning, Fixed Positioning, Relative Positioning, Absolute Positioning), CSS Layers with Z-Index.</td></tr><tr><td></td><td>Floats: The float Property, The clear Property, The clearfix Hack.</td></tr><tr><td></td><td>I. S.</td></tr><tr><td></td><td>Alle Son Callochigan</td></tr></tbody></table></textarea>

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Unit-IV	The JavaScript: Nature of JavaScript, Script Writing Basics, Enhancing HTML Documents with
	JavaScript, The Building Blocks.
	Introduction to JavaScript, JavaScript Engines, Values, Variables and Operators, Variable Mutation
	Basic Operators, Operator Precedence, JavaScript Types, Types Definition, Types in JavaScript, Objects, Type Conversion and Coercion, Static vs Dynamic Type Checking.
	JavaScript Conditionals: Introduction to Conditionals, Conditionals in JavaScript, Ternary
	Operators and Conditionals. Conditional Ladder & Switch statement.
	JavaScript Arrays: Introduction to Arrays, Declaring and Mutating Arrays, Array Methods and Properties, Replication with Array Methods, Multi-dimensional Arrays.
Unit-V	JavaScript Loops: Introduction to Loops, Loops in JavaScript, While and Do/While Loops, For Loops, Break and Continue in Loops, Iterating Arrays, Iterating Objects.
	JavaScript Functions: Introduction to Functions, Functions in JavaScript, Nested Functions in
	JavaScript, Arrow Functions in JavaScript, Function as an Argument, Function as the Returned Object,
	JavaScript Scope: Scope Introduction, Scope in JavaScript, Lexical Scope, Module Scope. Method of Adding Interactivity to a Web Page, Creating Dynamic Web Pages; Concept of Java
	Scripting the Forms.
	Java Scripting the Forms, Basic Script Construction, Talking to the Form Objects, Organizing
	Objects and Scripts, Field-Level Validation, Check Required Fields like Validating Zip Co Automated Formatting, Format Phone, Format Money, Automatic Calculation, Calculate Expirat
	Date Calculate Amount etc.
Unit-VI	Phases of Website Design and Development - Gathering information, Planning, Designing, Development, Testing, Website maintenance.
	Basic Elements of good Web Design- Content, Usability, Aesthetics(solid layout, effective
	typography, the right colour scheme, appropriate design elements), Visibility, Interaction.
	Parameters for a good website design – website design goal, well designed and functional, simp
	content & easy to navigate, connectivity & compatibility, limit use of fonts, customize the content according to the target audience, fluidity in use across platforms, readily accessible contact and
	location, optimized for search and the social web. Qualities of a good Web Designer – Great Communication, Creativity, Able to Meet Deadlines,
	Problem-Solving Skills, Passion, Self-Discipline, Software for Design, An Expansive Portfolio,
	Solid Design skills, self-learning, ability to work collaboratively, presentation skills.
	Web Publishing-Web Hosting Basics, Types of Hosting Packages,
	Registering domains, Defining Name Servers, Using Cpanel, Creating Emails in Cpanel, Using FTP Client, Maintaining a Website.
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Suggestive Books:

1	UTA (I A. J. CSS. Degion And Ruild Websites Wiley	Jon Duckett
1	HTMLAnd CSS: Design And Build Websites, Wiley	Jennifer Niederst
2	Learning Web Design: A Beginner's Guide To HTML,	Robbins
	CSS, JavaScript, And Web Graphics, O'reilly	
3		Steven M. Schafer
	Basics Of Web Design: Html5 & Css3, 5th Edition, Pearson	Felke-Morris
4	Education, 2019.	
5	Web Development & Design Foundations With Html5, 10th	Felke-Morris
	Edition. Addison-Wesley, 2020.	
6	Richard York, Beginning CSS: Cascading Style Sheets For Web	Ian Pouncey
_	Design, Wiley India.	

2. Suggestive digital platforms web links:

- <u>https://www.w3schools.com/</u>
- <u>https://spoken-tutorial.org/</u>
- <u>https://www.doc-developpement-durable.org/file/Projets-informatiques/cours-&-manuels-informatiques/htm-html-xml-ccs/Sams%20Teach%20Yourself%20HTML,%20CSS,%20and%20JavaScript%20All%20in%20Onpdf (PDF: 608 pages)</u>
- http://www.nematrian.com/Pages/HTMLCSSJSCombined.pdf (PDF: 514 pages)
 - https://www.daoudisamir.com/references/vs_ebooks/html5_css3.pdf (PDF: 681 pages)

Suggested equivalent online courses:

- <u>https://nptel.ac.in/courses/106/105/106105084/</u> (NPTEL Course: Internet Technology Part of the Course)
- https://onlinecourses.swayam2.ac.in/aic20_sp11/preview (HTML and CSS)
- <u>https://www.coursera.org/learn/html-css-javascript-for-web-developers#syllabus</u> (HTML, CSS, and JavaScript for Web Developers)
- <u>https://www.classcentral.com/course/html-css-javascript-for-web-developers-4270(HTML, CSS, and JavaScript for Web Developers)</u>
- <u>https://www.classcentral.com/course/duke-programming-web-4256</u>
- <u>https://www.coursera.org/learn/duke-programming-web</u> (Programming Foundations with JavaScrip HTML and CSS)

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i .	ve Evaluation (CCE): 30 marks External Exam	
nternal Assessment: आंतरिक मुल्यांकन	Class Text Assigment / Presentation	
नूल्याकन	क्लास टेस्ट असाइनमेंट / प्रस्तुतीकरण	Total = 30
Continuous Comprehensive		
Evaluation (CCE): 30 सतत व्यापक मूल्यांकन		
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External Assessment:	Section (A): Very Short Questions (50 word Each) अति लघु प्रश्न	05x02 = 10
	Section (B): Short Questions (200 word	
External Exam Section: 70	Section (B): Short Questions (200 Hord Each) लघु प्रश्न	$04\mathbf{x}05 = 20$
Time: 02.00 Hours		
	a dia (C) Lang Oractions (500 word	04x10 = 40
	Section (C): Long Questions (500 word Each) दीर्घ उत्तरीय प्रश्न	а. 2 — Л
		Total = 70

Suggestive List of Practicals (HTML)

- 1. Design a home page which displays information about your college department using headings, HTML entitites and paragraphs.
- 2. Implement different type of list tags in the college department homepage.
- 3. Create a webpage for any clinic using marquee and HTML formatting tags.
- 4. Create 3 Hyperlinks in home page connecting it to 3 different pages.
- 5. Create 3 hyperlinks in a page, which jumps to 3 different headings on same page.
- 6. Insert image(s) and iframe in a webpage.
- 7. Design a page with image of block diagram of computer, mapping each component as area with specific co-ordinates which when clicked may give their detail.

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- 8. Create a web page having two frames, Frame 1 containing links and another with contents of the link. When link is clicked appropriate contents should be displayed on Frame 2.
- 9. Design a timetable and display it in tabular format.
- 10. Demonstrate difference between "get" and "post" method of form tag in a form with name and password text fields.
- 11. Design an admission form for any course in your college with text, password fields, dropdown list, check-boxes, radio buttons, submit and reset button etc.
- 12. Create a website for online book store with Home, Login, Catalogue, Registration page with links to all these pages in a menu on top of every page. Embed heading, paragraph, images, video, iframe, form controls, table, list in this website.
- 13. Write a CSS style specification rule that would make all unordered lists (tags) have square bullets and a purple background.
- 14. Create a HTML form with the use of cascading style sheets.
- 15. Design a web page of your Home town with a attractive background color, text color, an image, font face by using Inline CSS formatting.
- 16. Create a catalog for an online shopping company that sells music records using style sheets.
- 17. Create a sample code to illustrate the Inline style sheet for your web page.
- 18. Create a sample code to illustrate the External style sheet for your web page
- 19. Design a web page by using different CSS border styles.
- 20. Demonstrate the use of CSS Box Model.
- 21. Change the color of all elements with the class "colortext" to "Blue". Set different margins for all four sides of a paragraph.

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Suggestive List of Practicals (JavaScript)

- 1. Write a JavaScript program to display the current day and time .
- 2. Write a JavaScript program to remove a character at the specified position of a given string and return the new string.
- 3. Write a JavaScript program to get the current date.
- 4. Write a JavaScript program to find the area of a triangle.
- 5. Write a JavaScript program to determine whether a given year is a leap year.
- 6. Write a JavaScript program to calculate multiplication and division of two numbers.
- 7. Write a JavaScript program to convert temperatures to and from Celsius, Fahrenheit.
- 8. Write a JavaScript program to check whether a given positive number is a multiple of 3.
- 9. Write a JavaScript program to change the case of a string.(i.e upper case to lower case and vice-versa).
- 10. Write a JavaScript program to compute the sum of elements of given array of integers.
- 11. Develop and demonstrate a HTML file that includes JavaScript script for taking a number n as input using prompt and display first n Fibonacci numbers in a paragraph.
- 12. Develop and demonstrate a HTML file that includes JavaScript script for taking full name in a text field and display first, middle, last name in 3 different labels. Middle and last name may be optional, thus message like "NA" should be displayed in corresponding labels. If input contains 2 words, then they should be considered as first and last name.
- 13. Develop and demonstrate a HTML file that includes JavaScript script for switching an image source for a image on click of "change" and "original" button.
- 14. Design HTML form for keeping student record, apply JavaScript validation in it for restriction of mandatory fields, numeric field, email-address field, specific value in a field etc.
- 15. Write a JavaScript code that displays text "Bigger Text" with increasing font size in the interval of 10ms in red color, when the font size reaches 50pt it displays "Smaller Text" in green color. Then the font size should decrease to 5pt and then stop.

Mathija

	Maximum Marks :100	
Internal Assessment :	Class Interaction /Quiz	Total 30
	Attendance	
	Assignments (Charts/ Model	
	Seminar / Rural Service/	
	Technology Dissemination /	
	Report of Excursion/ Lab Visits/	
	Survey / Industrial visit)	
External Assessment :	Viva Voce on Practical	Total 70
	Practical Record File	
	Table work / Experiments	
	Any remarks/ suggestions:	

Mathijani Jadob

(An Autonomous College affiliated to Barkatullah University, Bhopal) (NAAC Accredited 'A' Grade)



SYLLABUS UG

SESSION-2022-23

Course Type: Certificate Course

Python Programming

PRINCIPAL Sri Sathya Sai College For Women, Bhopal (M.P.)

(An Autonomous College Affiliated to Barkatullah University Bhopal) Department of Higher Education, Govt. of M.P. Under Graduate Syllabus (Annual Pattern) As recommended by Central Board of Studies and approved by the Governor of M. P. *wef 2021-2022*

(Session 2022-23) (NEP-2020)

Certificate Course

Additional Course UG I & II Year Certificate Course UG III PG I & II Year

Python Programming

2

Max. Marks: 100

Min. Passing Marks: 35

After completing the course, student will be able to -

- Interpret the fundamental Python syntax and semantics and be fluent in the use of Python control flow statements.
- Express proficiency in the handling of strings, functions and file handling.
- Determine the methods to create and manipulate Python programs by utilizing the data structures like lists, dictionaries, tuples and sets.
- Articulate the Object-Oriented Programming concepts such as encapsulation, inheritance and polymorphism as used in Python with class, modules and packages.
- Identify the commonly used operations involving database connectivity and use of tkinter for GUI programming.

	Content of the Course
Module	Topics
Ι	Python Basics : Python interpreter, Python idle, dynamically typed and strongly typed features, basic data types, variables, expressions, statements, operators, flow of execution. Input and Output statements, Conditionals: Boolean values and operators, conditional (if), alternative (if-else), chained conditional (if-elif-else). Iteration: while, for, break, continue, pass, implementing 'for' through range(), 'in' and 'not in' operators for sequence traversal. Creating and executing .py scripts.
II	Data Structures: Lists- append, extend, insert, index, remove, pop, count, sort, reverse, slicing
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Course Type

Course Title

Credit Value

Max. Mark

Course Learning Outcomes(CLO)

	list comprehension, Copying a list: deep copy, shallow copy. Tuples- index, count, usage, use of tuples as a swap function. Dictionaries-keys, values, tuples, nested dictionaries, dictionary comprehension. Strings- Single line and multi-line strings, formatter, isdigit, isalpha, isalnum, islower, istitle, isspace, title, lower, upper, strip, split, splitlines, join etc. Sets – union, intersection, subset, superset, difference, symmetric difference, copy, add, remove, discard etc.
	functions & File Handling: Inbuilt Functions- id, len, chr, ord etc., defining and calling a function, arguments, global versus local variables, defining and using lambda functions, the map(), filter(), reduce() functions.
×	Working with files : read, write and append modes: r, w, a, r+, w+, a+, reading-read(), readline(), readlines(), writing-write(), writelines(), seek(), tell(). Word count, copy file scripts through file handling concepts.
IV	Classes, modules and exceptional handling: Classes: Introduction, Member variables and defining methods, constructor, destructor, data encapsulation, inheritance, multiple inheritance, diamond problem solving technique of python. Modules: inbuilt modules- sys, random, time etc. import, fromimport, fromimport *. Constructing packages, role ofinitpy
	Exceptional Handling: The try-except-else-finally block, the raise statement, the hierarchy of exceptions, adding exceptions.
V	Database & GUI Programming : importing sqlite, connecting to database, creating table, insert, select, update, delete, drop tables, accessing and modifying tables through python. Graphical user interfaces; event-driven programming paradigm; tkinter module, creating simple GUI; buttons, labels, entry fields, dialogs; widget attributes - sizes, fonts, colors layouts, nested frames.

Suggestive List of Practicals

- 1. Find all numbers which are multiple of 17, but not the multiple of 5, between 2000 and 2500?
- 2. Print the first 2 and last 3 characters in a given string. Use the string slicing.
- 3. Write a program that eliminates duplicates in a list.
- 4. Implement shallow copy and deep copy of a list.
- 5. Find the largest of n numbers, using a user defined function largest()
- 6. Write a function that capitalizes all vowels in a string.
- 7. Read a line containing digits and letters. Write a program to give the count of digits and letters.
- 8. Write a function myReverse() which receives a string as an input and returns the reverse of the string.
- 9. Use the list comprehension methodology in python, to generate the squares of all odd numbers in a given list.
- 10. Generate a dictionary and print the same. The keys of the dictionary should be integers between 1 and 10 (both inclusive). The values should be the cubes of the corresponding keys.
- 11. Create a nested dictionary. The roll number of a student maps to a dictionary. This inner dictionary will have name, age, and place as keys. Read details of at least three students.
- 12. Enter a word. Create a dictionary with the letters of this word as keys, and the corresponding ASCII values as values.
- 13. Define a class with three methods: readString(), printString(), writeString(). The first method should read the contents of a file. The second method should print the contents to the console. The third method should write the contents to a new file.
- 14. Create a class account which has constructor to input account_no, name, balance from user,

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print_account() to display the account details, and deposit(), withdraw() which inputs amount and add/subtract them from the total amount of individual object.

- 15. Create a database table in sqlite and show the table data in python.
- 16. Implement DML commands in SQLite from python interface.
- 17. Implement tkinter methods in a python script.

Learning Resources

Textbooks, Reference Books, Other Resources

Suggested Readings:

- Taneja Sheetal & Kumar Naveen, "Python Programming: A modular approach", Pearson
- Zed A. Shaw, "Learn Python the Hard Way", Zed Shaw's Hard Way Series
- Liang Y. Daniel, "Introduction to Programming Using Python", Pearson
- Charles Dierbach, "Introduction to Computer Science using Python", Wiley
- Michael T. Goodrich, "Data Structures and Algorithms in Python", Wiley

Internal Assessment and Evaluation

Practical Exam &Viva: 100 Marks

Any remarks/suggestions: Focus of the Course/Lab practicals should be on developing ability of the student in acquiring expertise through hands on practice.

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(An Autonomous College affiliated to Barkatullah University, Bhopal) (NAAC Accredited 'A' Grade)



SYLLABUS

UG

SESSION-2022-23

Course Type: Certificate Course

Data Analysis and Visualization through Spreadsheet

PRINCIPAL Sri Sathya Sai College For Women, Bhopal (M.P.)

(An Autonomous College Affiliated to Barkatullah University Bhopal) Syllabus

		(Session 202 <u>3-24</u>)
Course Type		Certificate Course
Course Title	ан на На	Data Analysis & Visualization through Spreadsheet
Course Details	τ.	Additional Credit Course for I, II and III Year [N.E.P. Certificate Course for P.G. / B.Ed. Non N.E.P. Course]
Credit Value		2 Credits
Max.Marks: 70 [Th], 30 [Pr]		Min. Marks: 24 [Th], 11 [Pr]

Course Learning Outcomes(CLO) - On completion of this course, learners will be able to:

- 1. Prepare a spreadsheet file and enter data into the shee.
- 2. Illustrate formatting and editing capabilities on the data.
- 3. Demonstrate basic calculations and save data.
- 4. Import and export data into the spreadsheet.
- 5. Demonstrate basic visualizing, analyzing, organizing and sharing techniques

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Unit-I Introduction to Spreadsheet: What is Spreadsheet, History, Importance, Brands and platforms, Excel, Calc, and Google Sheets, User interface, Ribbon, Quick Access toolbar.
 Basics of Spreadsheet: Overview of spreadsheet, opening new file and saving spreadsheet (through menu and keyboard shortcut), rows, columns, cells, workbooks and worksheets. Fundamentals of rows, columns and cell and navigation; various modes of selecting cells (shift arrow, ctrl shift arrow, mouse click and drag, mouse click and shift click); merging cells; Selecting rows and columns. Non-contiguous cells; How to enter data (numeric, text, date), Autofit, keyboard navigation, Autocomplete, navigating edges. Navigating first and last used cells. Working with multiple sheet, inserting and deleting sheets, renaming sheets.
 Number formatting - Introduction, General and text, Number and fraction, Currency, Accounting, Percentage, Date, Time: Inserting and deleting rows, columns and cells.
 Formatting cells - Introduction, Bold, Italics and Underline, Border, Fill and Font, Alignment, Format painter and clear format, Editing the cell content, entering multiple lines of text using Ctrl+Enter, auto fill, copy and paste, cut and paste, auto fill series, use of fill handle through

Unit-II Printing worksheet: Select print area, see print preview, adjusting margin during print preview.
 Page Formatting: Page layout – Orientation, size, margins; watermark, page colour, page

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	borders; inserting headers and footer, inserting page numbers, date, path and filename. Viewing: Easy view using freeze panes (freeze rows and columns), split windows, layout vie
	 (normal, page break and Print). Saving and Sharing File: Embed, PDF, share workbooks through OneDrive, Online. Import and Export Data: Import Access Data, Microsoft Query, Import/Export Text File
	XML. Protecting/Securing using file properties: Protect Workbook, Protect Sheet, Lock Cell
	Read-only Workbook. Template: Creating worksheet thorough template - Budget, Calendar, Holidays, Meal Planne
	Invoice, Automated Invoice, Default Templates, Time Sheet, BMI calculator. Savir worksheet as template.
	 Calculations: Entering formula, editing formula, copying formula, cell references (absolut relative and mixed), paste formula (using keyboard shortcut and fill handle). Data Validation: Reject Invalid Dates, Budget Limit, Prevent Duplicate Entries, Produ Codes, Drop-down List, Dependent Drop-down Lists, Cm to inches, Kg to gm.
Unit-III	Introduction to Functions : What is function, entering functions, types of functions. Count and Sum: Countif, Count Blank/Nonblank Cells, Count Characters, Not Equal T
	Count Count and Sum: Countil, Count Blank/Nonblank Cens, Count Characters, Not Equal 14 Count Cells with Text, Sum, Running Total, Sumif, Sumproduct. Date & Time: DateDif, Today's Date, Date and Time Formats, Calculate Age, Tim Difference, Weekdays, Days until Birthday, Last Day of the Month, Add or Subtract Time
	Quarter, Day of the Year Text: Separate Strings, Count Words, Text to Columns, Find, Search, Change Case, Remov
	Spaces, Compare Text, Substitute vs Replace, Text, Concatenate, Substring. Lookup & Reference: Vlookup, Tax Rates, Index and Match, Two-way Lookup, Offse Case-sensitive Lookup, Left Lookup, Locate Maximum Value, Indirect, Two-column Looku
	Closest Match, Compare Two Columns, Xlookup. Financial: PMT, Loans with Different Durations, Investment or Annuity, Compound Interest CAGR, Loan Amortization Schedule, NPV, IRR, Depreciation, Profit Margin.
	Statistical: Average, Negative Numbers to Zero, Random Numbers, Rank, Percentiles ar Quartiles, Box and Whisker Plot, Averagelf, Forecast, MaxIfs and MinIfs, Weighted Averag
	Mode, Standard Deviation, Frequency. Round: Chop off Decimals, Nearest Multiple, Even and Odd, Mod.
Unit-IV	Data Visualisation: Introduction to charts, various type of charts (Column, Bar, Pie, Area, X Scatter, Bubble, Net, Stock, Column & Line); 3-D Shape (Bar, Cylinder, Cone, Pyramid
	Chart elements (Title, Subtitle, X-axis, Y-axis, Z-axis, Display grids, Legends, Display dat series); Creating a Chart: Selecting data series, select chart type, select chart components
	labels, background, axes, format and design. Conditional Formatting: Manage Rules, Formula based, Data Bars, Colour Scales, Icon Set Find Duplicates, Shade Alternate Rows, Compare Two Lists, Conflicting Rules, Heat Map
Unit-V	Data Analysis: Sort (Custom Sort Order, Sort by Color, Reverse List, Randomize List, SOR function). Filter (Number and Text Filters, Date Filters, Advanced Filter, Data Form, Remov
	Duplicates, Outlining Data, Subtotal, Unique Values, FILTER function. Pivot Tables: Creating pivot table, Group pivot table items, pivot table summarization, Mult
	level pivot table, Frequency distribution, pivot chart, Slicers, update pivot table, calculate field/item, GetPivotData.
	Tables: Structured References, Table Styles, Quick Analysis
	What-If Analysis: Data Tables, Goal Seek, Quadratic Equation
	Solver: Transportation Problem, Assignment Problem, Capital Investment, Shortest Pat Problem, Maximum Flow Problem, Sensitivity Analysis
	Analysis ToolPak: Histogram, Descriptive Statistics, ANOVA, F-Test, t-Test, Moving
	Average, Exponential Smoothing, Correlation, Covariance, Regression. Keywords/Tags: Excel,Calc, Formatting, Protecting range, sheet, Functions, Sort, Filter,
	Freeze, Pivot, Goal, Seek, Analysis, Visualization, Charts, Graphs, Correlation, Regression.
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Suggestive List of Practicals

Note: In the first day of the lab instructor must make the students get familiar with the interface of the Calc/Excel along with the movement of cursor, rows, columns, cells, cell number identification, formula bar, use of fill handle (drag as well double click), setting width of columns and height of rows, selecting rows and columns. Students must entry some data and practice above.

- 1. Simple data entry in a workbook in different sheet as given below.
 - a. Use the fill series method to fill the name as A-1, A-2 and RollNo. As 501, 502 to 550.
 - b. In Subject S1 Pr, put the marks more than 50 (to be used in next practical).
 - c. Do not enter data in Total S1, Total S2 and Total S3 column.
 - d. Perform the operations:
 - i. inserting column and rows,
 - ii. deleting columns and rows,
 - iii. selecting range of columns,
 - iv. change the width of column and height of rows,
 - v. hiding the rows and columns,
 - vi. show/unhide the rows and columns.
 - e. Rename the worksheet as "UG1-Marks"
 - f. Save the worksheet as "Marks".

	A	B	C	D		F	G	Н	1	J	K	L
1	Name	Roll No	S1- Th. (Max. 50)	S1 Pr. (Max. 50)	Tot. S1 (Max. 100)	S2- Th. (Max. 50)	S2 Pr. (Max. 50)	Tot. S2 (Max. 100)	S3- Th. (Max. 50)	S3 Pr. (Max. 50)	Tot. S3 (Max. 100)	Totoal Marks (S1+S2+S3)
2	A-1	501	36	40	=C2+D2	45	46		34	39		
3	A-2	502	27	32		34	38		23	40		
4	A-3	503	44	46		53	40		40	42		
5	A-4	504	24	30		34	39		33	40		
6	A-5	505	43	45		23	29		28	34		
7												
8						1.						
9												
51	A-50	550	39	45		42	40		32	42		

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1. Open the Workbook "Marks" as prepared in practical-1.

Perform the following operations in this worksheet named "Marks".

a. add the formula in E2 cell as C2+D2 for subject S1 total of theory and practical.

- b. Copy formula from E2 cell and paste the formula to E3...E51 cells using keyboard and using fill handle with the help of mouse (press and drag and double click on fill handle both)
- c. Repeat the process a and b for H2 cell (=F2+G2) cell and H3... H51.
- d. Repeat the process a and b for K2 cell (=I2+J2) cell and K3... K51.
- e. Find the total of P1+P2+P3 for all A-1 to A-51 students using formula and copy copy-paste method.

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f. Save the file with keyboard shortcut CTRL+S.

- 2. In the sheet prepared in experiment-2, validate that any marks are more than 50 in the or greater than 100 in the S1, S2 and S3 theory or practical column and Total columns. If found correct it and see that totals are automatically calculated. (Hint: Use filter method to find it). Save the file.
- 3. Use the above file and
 - a. Calculate the percentage of all students in column M by using formula say in M2 (=L2/300%) and copy-paste for rest of the students.
 - b. Find the number of students having percentage more than 60%.
 - c. Find the number of students having percentage between 45% and 60%.
 - d. Find the number of students having percentage less than 45%.
 - e. Save the file
- 4. Use the above file (as saved in experiment-4).
 - a. Find the name of the student got highest marks in S1.
 - b. Find the name of the student got highest marks in S2.
 - c. Find the name of the student got highest marks in S3.
 - d. Find the name of the student who got highest marks in both Theory and practical in subject S1, S2 and S3.
- 5. Use the above file (as saved in experiment-4).
 - a. Sort the data on percentage and show only the top 10 highest rank students. Save the file as "Marks-sorted".
 - b. Hide the marks details and show only the name of the student and percentage column.
 - c. Save/export the file as "Top 10 rank students.pdf" as pdf file.
 - g. Print the worksheet and save as pdf and share it to the instructor.
 - h. Show/unhide all the columns.
 - i. Export the file as "Marks.txt" as CSV file.
- 2. Open a blank worksheet.
 - a. Import the CSV file "Marks.txt" file into the worksheet.
 - b. Copy the whole content of this worksheet and paste it in the new worksheet in the same file/workbook. Rename this worksheet as "UG2-Marks".
 - c. Change the delete the students having percentage less than 45%. (delete rows)
 - d. Allot the new Roll Nos. to the students from 601 onwards.
 - e. Change the marks of the students. Students will see that the totals automatically change.
 - f. Save the file as template with file name "UG-Marks".
 - g. Save and protect the file with password.
 - h. Save the file
- 3. Use of various existing template to create the worksheet.
 - a. Modify according to your need
 - b. Get the required result
 - c. Print it with setting of page.
 - d. Save the file
- 4. Experiment related to the data validation (Use of drop-down list, length conversion etc.)
- 5. Experiment related to the use of various functions sum, average, count, sumif, countif, autosum etc.

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- 6. Experiments related to the financial and statistical functions and round of the numbers functions.
- 7. Create worksheet related to crop production of various crops in Indian states in last five years (Wheat, Rice, Pulses, Soyabean, Cane-sugar etc.).
 - a. Make a bar graph
 - b. Make the Pie graph
- 8. Create worksheet related to sales of a business company having various products in last 4 quarters for 10 sales persons.
 - a. Make a line graph to show the growth/decline of sales
 - b. Show the graph of each sales persons sales
 - c. Find the top 2 sales persons done in last 2 two quarters.
 - d. Find the sales person consistent in all 4 quarters.
 - e. Find the most popular product and the least popular product of the company.
- 9. Make all types of graphs available in the Calc/Excel using the required data with proper Title of the chart, X-axis and Y-axis title and legend titles.

10. Data analysis using Sort and Filters.

- 11. Data analysis using Pivot tables.
- 12. Use of conditional formatting.
- 13. Data analysis and forecasting using what-if-analysis.
- 14. Use of solver technique.
- 15. Experiment related to use of HLOOKUP and VLOOKUP.

Working with multiple sheets and linked data.

Keywords/Tags: Excel, Calc, Formatting, Protecting range, sheet, Functions, Formulaes, sum, count, average, min, max, if, sumif(s), countif(s), Hlookup, Vlookup, Linking, Sort, Filter, Freeze, Pivot, Goal, Seek, Analysis, Visualization, Charts, Graphs, Financial functions, Statistical functions, what-if-analysis.

	Suggestion Books:-	ē	
1	Beginning OpenOfficeCalc: From	JacekArtymiak	Apress, ISBN:
	Setting Up Simple Spreadsheets to		9781430231592
	Business Forecasting, 2011,		
2	, OpenOffice.org Calc Functions and	JacekArtymiak	
	Formulas Tips. Essential		
	OpenOffice.org Calc Skills, 1st ed.,	,	
	2011		
3	.; Microsoft Excel 2019 Bible: The	Michael Alexander,	
	Comprehensive Tutorial Resource;	Richard Kusleika, John	
	John Wiley & Sons Inc.	Walkenbach	
4	; Microsoft Excel 2016 Bible: The	Walkenbach J.	
	Comprehensive Tutorial Resource;		
	Wiley.		

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5	Excel: Quick Start Guide from Beginner to Expert (Excel, Microsoft Office);	Fischer W.	CreateSpace Independent Publishing Platform.
6	Excel Charts; John Wiley & Sons.	Walkenbach J.	

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SYLLABUS

UG

SESSION-2022-23

Course Type: Certificate Course Human Values and Professional Ethics

PRINCIPAL Sri Sathya Sai College For Women, Bhopal (M.P.)

(An Autonomous College Affiliated to Barkatullah University Bhopal) Accredited 'A' by NAAC

Common for All Students

Human Values and Professional Ethics

Course Objective: To enable the students to imbibe and internalize the values and Ethical Behaviour in the personal and professional lives.

Course outcomes: The students will understand the importance of values and ethics in their personal lives and professional careers. The students will learn the rights and responsibilities as an employee, team member and a global citizen.

Unit I	Introduction to Value Education
	1. Value Education, Definition, Concept and Need and significance of value education.
	2. The content and process of value education
	3. Self-Exploration as a significant part of value Education
	4. Happiness and Prosperity as parts of value education.
Unit II	Harmony in the Family and Society and Harmony in the Nature
	1. Family as a basic unit of Human Interaction and values in relationships.
	2. Inculcating values of gratitude, Reverence, Love, care and affection.
Unit III	Personal Harmony
	1. Human Being is more than just the Body.
	2. Understanding Co-existence of the Self and the Body.
	3. Understanding Needs of the Self and the Needs of the Body.
Unit IV	Social Ethics
	1. Goal of Human life- Righteous living.
	2. Universal Human order and Ethical conduct.
Unit V	Professional Ethics
	1. Professional Ethics conduct and values.
	2. Issues in Professional Ethics- The Current scenario?
	3. Workplace Rights and Responsibilities.

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SYLLABUS

UG

SESSION-2022-23

Course Type: Certificate Course

Indian Polity

PRINCIPAL Sri Sathya Sai College For Women, Bhopal (M.P.)

Indian Polity

Importance of Subject-

The Complete Study Material on the "Indian Polity" is designed to help the aspirants of competitive exams like UPSC/PCS/SSC/CDS and others. This material contains; Fundamental Rights Fundamental Duties, Parliament Indian Judiciary, Union State Executive Constitutional Non-Constitutional bodies.

Subject experts have analysed that questions based on the Indian Polity always occupy a place in almost all the competitive exams held in India. So to fill up the requirement of the aspirants of different competitive exams like IAS/PCS/SSC/NDA.CTET/UPTET etc. we have created a comprehensive study material on the "Indian Polity".

Course outlines

The entire study material is divided into five major section like; Indian Constitution, Fundamental rights & Fundamental Duties, Parliament & Indian Judiciary, Union & State Executive & Constitutional & Non-Constitutional bodies. All these section covers all the important topics from the Subject in the form of Study notes.

1. Indian Constitution: An overview

- The making of the Constitution of India
- Preamble of the Constitution
- The Constituent Assembly of India
- Basic Structure (Doctrine) of the Constitution
- Features of the Indian Constitution
- Constitution of India: features taken from other countries
- Parliamentary System in India
- Directive Principles of State Policy
- Pressure Groups in India
- Political Parties in India
- Elections in India
- Special Status to the Other Indian States
- Schedules in the Constitution of India
- Scheduled and Tribal Areas in India
- The Representation of People Act, 1951
- Emergency Provisions in Indian Constitution
- Electoral Reforms in India
- Panchayati Raj Systems in India
- List of Important Articles of the Indian Constitution

2. Fundamental Rights & Fundamental Duties

- Fundamental Rights
- Writs and their Scope

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• Fundamental Duties of the Citizens of India

3. Parliament & Indian Judiciary

- Parliament of India
- Parliamentary Committees
- Budget in Parliament
- Amendment of the Constitution
- Bills and Passing of an Act
- Anti-Defection Law
- Supreme Court of India
- High Courts in India
- Subordinate Courts in India
- Central Administrative Tribunal
- Judicial Review and Judicial Activism

4. Union & State Executive

- Office of the President of India: Instructions to electors
- List of Vice-Presidents in India and their Term of Office
- Presidential Elections in India 2012: Control Room
- Presidential Elections 2012: Returning and Assistant returning officers
- Presidential Elections in India
- The Dome of Rashtrapati Bhavan: The official home of the President of India
- Rashtrapati Bhavan : Mughal Gardens
- The history of Rashtrapati Bhavan: The official home of the President of India
- Vice Presidential Elections in India
- List of Vice-Presidents in India and their Term of Office
- Prime Minister of India
- Prime Minister's Office of India
- PMO and Cabinet Secretary
- Cabinet Committees
- Union-State Relations / Centre-State Relations
- Governor in Indian Constitution
- Chief Minister in India
- District Collector/Magistrate in India
- The Union
- State
- Union Territories

5. Constitutional & Non-Constitutional Bodies

- Election Commission of India
- Union Public Service Commission
- State Public Service Commission
- National Finance Commission
- State Finance Commission
- National Commission for Scheduled Castes
- National Commission for Scheduled Tribes
- Special Officer for Linguistic Minorities
- Comptroller and Auditor General of India
- Attorney General of India
- Advocate General of the State

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- Planning Commission of India •
- National Institution for Transforming India (NITI) Aayog
- Planning Commission and NITI Aayog
- National Development Council
- National Human Rights Commission
- State Human Rights Commission
- Central Information Commission
- State Information Commission
- Central Vigilance Commission
- Central Bureau of Investigation
- Lokpal and Lokayukta in Indian Constitution

Deiror R. Dullar **Revision.** Practice Sets and Examination

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