# FOUR YEAR UNDERGRADUATE PROGRAM (NEP-2020)

# Program: Bachelor in Science (2024 -28) DISCIPLINE - INFORMATION TECHNOLOGY

### SESSION - 2024-25

	DSC -01 to 08	DSE -01 to 12			
Code	Title	Code	Title		
ITSC-01T	Fundamental of IT and MS-Office	ITSE -01	Data Structure		
ITSC-01P	Lab 1: MS-Office	ITSE -02	Internet and E-Commerce		
ITSC-02T	Programming in C++	ITSE -03	Information and Network Security		
TESC-02P	Lab 2: Programming in C++	ITSE -04	Introduction to Artificial Intelligence		
Π'SC-03'Γ	Relational Database Management System	1TSE -05	Computer System Architecture		
ITSC-03P	Lab 3: Relational Database Management System (Oracle / MySQL)	ITSE -06T	Mobile Application Development		
ITSC-04T	Programming in . Net	ITSE -06P	Lab 8: Mobile Application Development		
ITSC-04P	Lab 4: Programming in . Net	ITSE -07	Software Engineering		
ITSC-05T	Programming in Java	ITSE_08	Theory of Computation		
ITSC-05P	Lab 5; Programming in Java	ITSE -09	Soft Computing		
ITSC-06T	Web Technology	ITSE -10	Computer Graphics		
ITSC-06P	Lab 6: Web Technology	ITSE-11	Cloud Computing		
11'SC-071'	Programming in Python	ITSE -12	Major Project		
TISC-07P	Lab 7: Programming in Python				
ITSC-08T	Fundamental of IoT and Applications				
ITSC-08P	Lab 9: Fundamental of IoT and Applications				
	DGE -01 & 02		VAC		
ITGE -01T Fundamental of IT and MS-Office		ITVAC-01	Artificial Intelligence		
ITGE -01P	Lab 1: MS-Office		SEC		
TTGE -021	Programming in C++	ITSEC-01	MS OFFICE		
"TGE -02P	Lab 2: Programming in C++	li li	Chairman Studies W		

# Program Outcomes (PO):

Gain a complete exposure to the theories and practices of Information Technology.

 Get transformed into a skilled learner and active programmer, enabling the students to focus on their higher studies.

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Value IT professionals and programmers.

• Explore how the concepts and applications of Information technology lead to innovative thinking with Shahood technology lead to innovative thinking with problem-solving attitude.

# Program Specific Outcomes (PSO):

Understand the basic IT knowledge and practical application in MS Office.

Understanding the concept of programming and develop program in C++.

Understanding the concept of data structure and implementation with C/C++.

Dr. H. S. Hota Krun

Chairvnan (Drk. B. Duhay) (Dr. S. Saly) Suggested (Dr. Amblytama) (Dr. S. Jain) (R. Khyuttey) Sha

Inderstanding the concept of DBMS and implementation in MySQL / Oracle,

Understanding the concept of Dot Net technology with practical implementation.

Understanding the concept of OOPs and Java programming and develop program in Java.

Understanding the concept of web technology and its implementation with HTML / CSS / DHTML / PHP.

Understand the basic concept of internet and E-commerce.

Understanding the basic concept of information and network security.

Understanding the basic concept of Artificial Intelligence.

Dr. H. S. Hoto Line. Cheurman Or. k.g. Dubay) 7

# **Curriculum Structure**

# Scheme

Program: B.Sc.

Discipline: Information Technology

Semester	Course Type	Course Code	Course Title	Total Mark		
	Course Type			Crean	Max	Min
14		ITSC-01T	Fundamental of IT and MS-Office	3	100	40
Semester	DSC (Major/Core)	TTSC-01P	Lab 1: MS-Office	1	50	20
2 <sup>nd</sup>	Control of the second	ITSC-02T Programming in C+1		3	-100	40
Semester	DSC (Major/Core)	ITSC-02P	Lab 2: Programming in C++	1	50	20
Vietnamilas	DSC	ITSC-03T	Relational Database Management System	3	100	40
3 <sup>rd</sup> Semester	(Major/Core)	ITSC-03P	Lab 3: Relational Database  Management System  (Oracle/MySQL)	1	50	20
	DSE	ITSE-01	Data Structure	4	100	40
Commission of Marie Value		ITSC-04T	Programming in .Net	3	100	40
406	DSC (Major/Core)	1T'SC-04P	Lab 4: Programming in .Net	1	50	20
Semester	DSE	ITSE-02	Internet and E-Commerce	4	100	40
1 - 2 - 11 - 18 /c - 10 · 1 · 10 · 10		ITSC-05T	Programming in JAVA	3.	100	40
5111	DSC (Major/Core)	ITSC-05P	Lab 5: Programming in JAVA	1	50	20
Semester	DSE	ITSE-03	Information and Network Security	4	100	40
		ITSC-06T	Web Technology	3	100	40
6111	DSC (Major/Core)	ITSC-06P	Lab 6: Web Technology	1	5013	20 1 men
Semeste	DSE (c)	ITOT 04	Introduction to Artificial Intelligence	4	Signie	
	T			have startes		n, Flai
Sincal Maluy	. I DSC	TTSC-07T	Programming in Python	3	100	. 40
Semester	(Major/Core)		Lab 7: Programming in Python	!_	50	20
	DSE	ITSE-05	Computer System Architecture	4	100	40

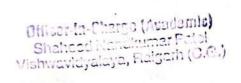
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(Dr.K. & Dubey)

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		ITSE-06T	Mobile Application Development	3	100	40	
		ITSE-06P	Lab 8: Mobile Application Development	1	50	20	
		ITSE-07	Software Engineering	4	100	40	
		ITSE-08	Theory of Computation	4	100	40	
	DSC	ITSC-08T	Fundamental of IoT and Applications	3	100	40	
	(Major/Core)	ITSC-08P	Lab 9: Fundamental of IoT and Applications	1	50	20	
Semester	DSE	ITSE-09	Soft Computing	4	100	40	
		ITSE-10	Computer Graphics	4	100	40	
	x 1	1TSE-11	Cloud Computing	4	100	40	
		ITSE-12	Major Project	4	100	40	
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Offi	sor in Charca (/ Jahesel Mandau Mavidyalaya, Fis	reademis) mer Folki algorh (O.G.)	(9/2-3000)	- 1	d Alama Nand Sa Jaya, Ra	nar Pala ligarh (C	:! .@

# FOUR YEAR UNDERGRADUATE PROGRAM (2024 – 28) DEPARTMENT OF INFORMATION TECHNOLOGY COURSE CURRICULUM

P	AF	RT- A: Introd	uction			
Pr	og	ram: Bachelorin	Science (IT)	C		
(C	erti	ficate / Diploma / De	gree/Honors)	Semester - I	Session: 2024	-2025
1	C	ourse Code	ITSC-01T			
2	C	ourse Title	Fundamental of IT	and MS-Office		
3	C	ourse Type	DSC (Discipline Spe	cific Course)		
4	P	rerequisite	As per program			
5		ourse Learning. Outcomes (CLO)	Organize files at     Acquire knowle     Develop inform     in advance trend	f basic concepts and terr nd documents on storag dge of ICT and Internet ation technology soluti ls of IT.	minology of information te te devices.	quirements
6		redit Value			earning & Observation	
		otal Marks	Max. Marks: 100		Min Passing Marks:	40
PΑ	R		t of the Course			_
		Total No. of Tea	ching-Learning Perio	ods (01 Hr. per peri	od) - 45 Periods (45 H	ours)
Un	it		Topics	(Course contents)		No. of Period
	Indian Knowledge System and Computer Science: Number System in India-Historical evidence, Salient aspect of Indian Mathematics. Bhuta-Samkhya system, Katapayadi system, pingala and the binary system, Sulbha Sutra as modern arithmetic and numerical mathematics.  Introduction to Computer: History of computer, Generations and Classification, Basic Anatomy of Computer: Block Diagram, Central Processing Unit (CPU): Function of each Unit, Memory: Primary, Cache, Flash, Software and its needs, Types of S/W: System Software and Application Software, Types of Programming Language: Machine Language, Assembly Language, High Level Language their advantages and disadvantages, Language Processors/Translators: Assembler, Interpreter and Compiler, Fundamental of Information Technology: Data and Information, Concept of IT, Application of IT, What is ICT?, Components of ICT, Impact of ICT in Society.  Advanced Trends in IT: Cloud Technology, Virtual LAN Technology, M-Commerce, Nanotechnology, Virtual Reality, 3-D Printing, Internet of Things (IoT), Artificial Intelligence (AI), Machine Learning (ML), Cloud Computing, Quantum Computing, G-Suite, Gol digital initiatives in higher education: SWAYAM, Swayam Prabha, National Academic Depository, National Digital Library of India, E-Sodh-Sindhu, Virtual labs, e-Yantra and NPTEL.				12	
11	MS-Word: Introduction to word processing software and its features, Creating new document, Saving documents, Opening and Printing documents. Home Tab Setting fonts, Paragraph settings, Various styles (Normal, No spacing, Heading1 Heading2, Title, Strong), Find & Replace, Format painter, Copy paste and paste special. Insert Tab: Pages, Tables, Pictures, Clipart, Shapes, Header & Footer, Word Art, Equation and Symbols. Page Layout Tab: Page setup, Page Background, Paragraph (indent and spacing). Mailing Tab: Create Envelops and Labels, Mail Merge. Review Tab: Spelling and Grammar check, New comment, Protect document, View Tab. Document views, Zoom, Window (New window, Split, Switch window).					ii iirmaņ





III MS-Excel: Introducing Excel, Use of Excel sheet, creating new sheet, Saving, Opening, and Printing workbook. Home Tab: Font, Alignment, Number, Styles and cells and editing, Conditional Formatting. Insert Table, Charts (column chart, Pic chart, Bar chart, Line chart) and Texts (header & footer, word art, signature line). Page Layout Tab: Page setup options, Scale to fit (width, height, scale). Formulas Tab: Auto sum (sum, 11 average, min, max), Logical (IF, and, or, not, true, false), Math & Trig (sin, cos, tan, ceiling, floor, fact, mod, log), Sort and Filter options, Data validation, Group and ungroup. Review Tab: Protect sheet, Protect workbook, and Share workbook. View Tab: Page breaks, Page layout, Freezing Panes, Split and hide. Working with PowerPoint and MS-Access IV PowerPoint: Introducing PowerPoint, Use of PowerPoint presentation, Creating new slides saving, Opening and printing. Home Tab: New slide, Layout, Reset, Delete, Setting text direction, Align text, Convert to smart art, Drawing options. Insert Tab: Table, Picture, Clipart, Photo album, Smart art, Shapes and chart, Movie and sound, Hyperlink and action, Text box, Word art, Object. Design Tab: Page setup options, Slide orientation, Applying various themes, Selecting background style and formatting it. 11 Animations Tab: Custom animation for entrance, Exit and emphasis, Applying slide transition, Setting transition speed and sound, Animation on rehearse timing. Slideshow & View Tab: Start slide, Show options, and Setup options. View tab: Presentation views, Colors and Window option. MS-Access: Introduction to DBMS, features of DBMS, creating blank databases, Saving it in accdb format, Defining data type in MS Access, Creating tables, creating reports, query wizard. Information Technology (IT), Information and Communication Technology (ICT), G-Suite, MS Word, MS Excel, MS Power Point, MS-Access. Signature of Convener & Members of CBoS: Drottes Hora Theken

#### Learning Resources PART-C:

Text Books, Reference Books and Others

### Text Books Recommended:

- Computer Fundamentals, P.K. Sinha, BPB Publication, Sixth Edition.
- Fundamentals of Information Technology, Chetan Shrivastava, Kalyan Publishers.
- Fundamentals of Computers, V. Rajaraman, PHI Sixth Edition.
- Computer Fundamentals and Office Automation, Dr. Santosh Kumar Miri, Iterative International Publisher IIP.
- Computer Fundamentals Architecture and Organization, B. Ram, New Age International Publishers, Fifth Edition.
- Fundamentals of Information Technology, Alexis Leon and Mathews Leon, Vikash Publication.

### Reference Books Recommended:

- Introduction to Information Technology, V. Rajaraman, PHI publication.
- Fundamental of IT, Leon and Leon, Leon Tec world.
- Introduction to Information Technology, Aksoy and Denardis, Cengage learning.
- Computers Today, Suresh K. Basandra, Galgotia Publications.
- Information Technology The breaking wave, Dennis P.Curtin, Kim Foley, Kunai Sen and Cathleen Morin, TMH.
- OFFICE 2013 in Simple Steps, Kogent Solution Inc., DremTech Press.
- Access 2010 in Simple Steps by Kogent Learning Solutions Inc.

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# Online Resources:

- Introduction to Computer Fundamental from W3school: https://www.w3schools.blog/computer-fundamentals-tutorial
- Introduction to MS-Word from W3school; https\_www.w3schools.blog/ms-word-jutorial
- Introduction to MS-Excel from W3school:
  - https://www.w3schools.com/excel/excel\_introduction.php
- Introduction to MS-PowerPoint from W3school: https://www.w3schools.blog/powerpoint-intorial
- Introduction to MS-Access from W3school: https://www.w3schools.com/sql/sql\_ref\_msaccess.asp
- Fundamentals of Computers & Information Technology (in Hindi): https://www.mcu.ac.in/wp-content/uploads/2020/04/1PGDCA1-Unit-I-Fundamentals-of-Computers-Information-Technology.pdf.
- Fundamentals of Computers & Information Technology (in Hindi): https://hte.rajasthan.gov.in/dept/dte/board of technical education, rajasthan/government poly technic\_college\_hanumangarh/uploads/doc/fundamental-\_final-rkd pdf
- Information and Computers Technology: https://ebseacademic.nic.in/web\_material/doc/2014/11\_ICT-IX.pdf.pdf.
- Microsoft Office (in Hindi): hups://www.scribd.com/document/534988849/9-Microsoft-office-in-hindi-www-GkNotesPDF com.
- MS-OFFICE:
  - https://www.rgycsm.org/uploads/books/MICROSOFT-OFFICE-BOOK.pdf.
- MS-OFFICE:
  - Hindi Notes: https://www.copaguide.com/2020/04/ms-office-topics.html.
- Microsoft Office Full Crash Course: https://www.youtube.com/watch?v=SH4ovV5AJ6A

PART -D: Assessi	nent and Evaluation	A LONG TO STATE OF THE PARTY OF		
Suggested Continuous Ev Maximum Marks:	ratuation Methods: 100 Marks			
Continuous Internal Asso End Semester Exam (ESI				
Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test / Quiz-(2): 20 +20 Assignment / Seminar - 10 Total Marks - 30	Better marks out of the two Test / Quiz obtained marks in Assignment shall be considered against 30 Marks		
End Semester  Exam (ESE):  Two section – A & B  Section A: Q1. Objective – 10 x1= 10 Mark; Q2. Short answer type-5x4=20 N  Section B: Descriptive answer type qts., 1 out of 2 from each unit-4x10-40 Mark				

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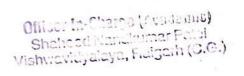
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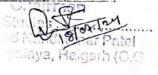
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# FOUR YEAR UNDERGRADUATE PROGRAM (2024 – 28) DEPARTMENT OF INFORMATION TECHNOLOGY

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		duction					
Program: Bachelor in Science (IT) (Certificate / Diploma / Degree)			Semester - I	Session: 2024-2	2025		
1	Course Code	TTSC-01P					
2	Course Title	Course Title Lab 1: MS- Office					
3	Course Type	Course Type Practical					
1	Prerequisite	As per program		1			
17.	Course Learning. Outcomes (CLO)	<ul> <li>Acquire knowledge o</li> <li>Develop information advance trends of IT.</li> <li>Acquire knowledge o</li> </ul>	edge of MS-Office. scuments on storage de of ICT and Internet app technology solutions b of MS-Excel, MS-Pow	evices.  Ilications.  By evaluating user require  CrPoint and MS-Access.	Annual Color of the Color		
6 7		1 Credits   Credit = 30 I	Min Passing N		ung		
		List of Exp Application of Informa		,	No. of Period		
	Spam and Tras  2. How to design  3. How to create  4. How do teach Classroom?  5. How do stude  6. How to use so  7. How to use So  8. How to use Go  9. How to shar Bluetooth.	mail in a Gmail account? Wrish labels.  Google form? Write the step different student classes in Gners create assignments and assignments, due date cial media platforms like twite cial media platforms like Flicoogle spreadsheets, Google Se files between mobile ph	os with appropriate was on the coordinary of the classroom. In provide due dates, es, or grades in Googter, Facebook and Yokr, Skype, yahoo and lides and Google for one and computer	or grades in Google gle Classroom? ouTube? d WhatsApp? ms? system/Laptop using	200		
		MS-Wo	ord				
1. Prepare a grocery list having four columns (Serial number, the name of the product, quantity and price) for the month of April, 06.  ➤ Font specific actions for Title (Grocery List):14-pointArialfontinboldanditalics.  ➤ The headings of the columns should be in12-point and bold.  ➤ The rest of the document should be in10-point Times New Roman.  ➤ Leave a gap of 12-points after the title.							





2. Create a telephone directory.

> The heading should be16-point Arial Font in bold.

> The rest of the document should use 10-point font size.

> Other headings should use 10-point Courier New Font.

The footer should show the page number as well as the date last updated.

3. Design a time-table form for your college.

- > The first line should mention the name of the collegein16-point Arial Font and should be bold.
- > The second line should give the course name/teacher's name and the department in14-pointArial.

> Leave a gap of 12-points.

> The rest of the document should use 10-point Times New Roman font.

- > The footer should contain your specifications as the designer and date of creation.
- 4. XYZ Publications plan store lease an e-book design dapper your syllabus. Design the First page of the book as per the given specifications.

> The title of the book should appearinboldusing20-pointArialfont.

> The name of the author and his qualifications should be in the center of the page in 16-point Arial font.

> At the bottom of the document should be the name of the publisher and address

in16-point Times New Roman.

> The details of the offices of the publisher (only location) should appear in the footer.

5. Create the following one page documents.

> Compose a note inviting friends together at your house, including a list of things to bring with them.

> Design a certificate in landscape orientation with a border around the document.

> Design a Garage Sale sign.

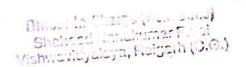
> Make an assignment outlining your rules for your bedroom at home, using a numbered list.

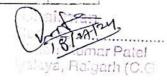
6. Create the following documents:

- > A newsletter with a headline and 2 columns in portrait orientation, including at least one image surrounded by text.
- > Use a newsletter format to promote upcoming projects or events in your classroom or college.
- 7. Convert following text to a table, using comma as delimiter Type the following as shown (do not bold).

Color, Style, Item Blue, A980, Van Red, X023, Car Green, YL724, Truck Name, Age, Sex Bob, 23, M Linda, 46, F Tom, 29, M

8. Enter the following data into a table given on the next page.





Salesperson	Dolls	Trucks	Puzzles
Kennedy, Sally	1327	1423	1193
White, Pete	1421	3863	2934
Pillar, James	5214	3247	5467
York, George	2190	1278	1928
Banks, Jennifer	1201	2528	1203
Atwater, Kelly	4098	3079	2067
Pillar, James	5214	3247	5467
York, George	2190	1278	1928
Banks, Jennifer	1201	2528	1203
Atwater, Kelly	4098	3079	2067

Add a column Region (values: S, N, N, S, S, S) between the Salesperson and Dolls columns to the given table Sort your table data by Region and within Region by Sales person in ascending order:

In this exercise, you will add a new row to your table, place the word Total at the bottom of the Sales person column, and sum the Dolls, Trucks, and Puzzles columns.

- 9. Wrapping of text around the image.
- 10. How to install MS-Office in Windows operating system.
- 11. How to convert word, excel and PowerPoint into pdf & pdf to word.
- 12. How to merge and split pdf files.

#### MS-Excel

1. Enter the Following data in Excel Sheet

REGIONAL SALES PROJECTION						
State	Qtr1	Qtr2	Qtr3	Qtr4	Qtr Total	Rate Amount
Delhi	2020	2400	2100	3000	15	
Punjab	1100	1300	1500	1400	20	
U,P.	3000	3200	2600	2800	17	
Haryana	1800	2000	2200	2700	15	
Rajasthan	2100	2000	1800	2200	20	
TOTAL						
AVERAGE						

a. Apply Formatting as follow:

Title in TIMES NEW ROMAN

FontSize-14

Remaining text-ARIAL, FontSize-10

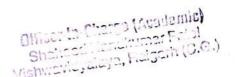
State name and Qtr. Heading Bold, Italic with Gray Fill Color.

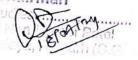
Numbers in two decimal places.

Qtr. Heading in center Alignment.

Apply Border to whole data.

- b. Calculate State and Qtr. Total
- c. Calculate Average for each quarter
- d. Calculate Amount=Rate\*Total.





2. Given the following worksheet

	Α	В	C	D
1	Roll No.	Name	Marks	Grade
2	1001	Sachin	99	
3	1002	Schwag	65	
4	1003	Rahul	41	
5	1004	Souray	89	
6	1005	Harbhajan	56	

Calculate the grade of these students on the basis of following guidelines:

If Marks	Then Grade
>=80	A+
>= 60 and <80	Α
>= 50 and <60	В
<50	F

3. Given the following worksheet

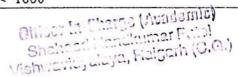
	Α	В	С	D	E	F	G
1	Salesinan Sales in(Rs.)						
2	No.	Qtr1	Qtr2	Qtr3	Qtr4	Total	Commission
3	S001	5000	8500	12000	9000		
4	S002	7000	4000	7500	11000		
5	S003	4000	9000	6500	8200		
6	S004	5500	6900	4500	10500		
7	S005	7400	8500	9200	8300		
8	S006	5300	7600	9800	6100		

Calculate the commission earned by the salesman on the basis of following Candidates:

If Total Sales	Then Commission
<20000	0% of sales
> 20000 and < 25000	4% of sales
> 25000 and < 30000	5.5% of sales
> 30000 and < 35000	8%of sales
>=35000	11%of sales

The total sales are the sum of sales of all the four quarters.

- 4. Company XYZ Ltd. pays a monthly salary to its employees who consist of basic salary, allowances & deductions. The details of allowances and deductions are as follows:
  - HRA Dependent on Basic
     30% of Basic if Basic<=1000</li>
     25% of Basic if Basic>1000 & Basic<=3000</li>
     20% of Basic if Basic>3000
  - DA Fixed for all employees,30% of Basic
  - Conveyance Allowance(CA) Rs.50/- if Basic is <=1000</li>



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Rs.75/- if Basic > 1000 & Basic <= 2000

Rs.100 if Basic>2000

Entertainment Allowance (EA)

NIL if Basic is <= 1000 Rs.100/-if Basic > 1000

#### Deductions

Provident Fund

6% of Basic

Group Insurance Premium

Rs.40/-if Basic is <=1500

Rs.60/-if Basic > 1500 & Basic <= 3000

Rs.80/-if Basic>3000

Calculate the following:

Gross Salary=Basic +HRA+ DA+ CA+ EA

Total Deduction=Provident Fund + Group Insurance Premium

Net Salary=Gross Salary-Total Deduction

5. Create Payment Table for a fixed Principal amount, variable rate of interests and time in the form at below:

No. of Installments	5%	6%	7%	8%	9%
3	XX	XX	XX	XX	XX
-4	XX-	XX	XX	-XX	XX
- 5	XX	XX	XX	XX	XX
6	XX	XX	XX	XX	XX

6. Use an array formula to calculate Simple Interest for given principal amounts given the rate of Interest and time

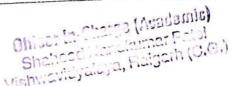
ia time	
Rate of Interest	8%
Time	5Years
Principal	Simple Interest
1000`	?
18000	?
5200	?

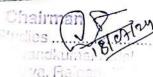
7. The following table gives a year wise sale figure of five salesmen in Rs.

2019	2020	2021	2022
	12000	20000	50000
1849-00-70	18000	50000	60000
	22000	70000	70000
	30000	100000	80000
		125000	90000
	2019 10000 15000 20000 30000 40000	10000     12000       15000     18000       20000     22000       30000     30000	10000     12000     20000       15000     18000     50000       20000     22000     70000       30000     30000     100000

- a. Calculate total sale year wise.
- b. Calculate the net sale made by each salesman
- c. Calculate the maximum sale made by the salesman
- d. Calculate the commission for each salesman under the condition.

>> If total sales > 4, 00,000 give 5% commission on total sale made by the salesman.





>> Otherwise give 2% commission.

- e. Draw a bar graph representing the sale made by each salesman.
- f. Draw a pie graph representing the sale made by a salesman in 2000.
- 8. Enter the following data in Excel Sheet

# PERSONAL BUDGET FOR FIRST QUARTER

Monthly Income(Net): 1,475

EXPENSES	JAN	FEB	MARCH QUARTER TOTAL	QUARTER AVERAGE
Rent	600.00	600.00	600.00	
Telephone	48.25	43.50	60.00	
Utilities	67.27	110.00	70.00	
Credit Card	200.00	110.00	70.00	
Oil	100.00	150.00	90.00	
AV to Insurance	150.00			
Cable TV	40.75	40.75	40.75	
Monthly Total				

- Calculate Quarter total and Quarter average.
- b. Calculate Monthly total.
- c. Surplus=Monthly income-Monthly total.
- d. What would be the total surplus if monthly income is 1500.
- e. How much does the telephone expense for March differ from quarter average?
- f. Create a 3D column graph for telephone and utilities.
- g. Create a pie chart for monthly expenses.
- 9. Enter the following data in Excel Sheet

# TOTAL REVENUE EARNED FOR SAM'S BOOK STALL

Publisher Name		1998	1999	2000	Tota
	Rs. 1,000.00	Rs. 1100.00	Rs. 1,300.00	Rs. 800.00	
	Rs. 1,500.00		Rs. 1,000.00	Rs. 2,000.00	
	Rs. 700.00			Rs. 600.00	
	Rs. 1,200.00	Rs. 500.00		Rs. 1,100.00.	

- a) Compute the total revenue earned.
- b) Plot the line chart to compare the revenue of all publishers for 4 years.
- c) Chart Title should be Total Revenue of Sam's Book stall(1997-2000)'
- d) Give appropriate categories and value axis title.
- 10. Generate 25 random numbers between 0 & 100 and find their sum, average and count. How many no. are in the range 50-60.

# MS-Power Point

- 1. Do the following task:
  - Start a new blank presentation
  - Your first Slide is going to be a Title Slide
  - Write the Text as in the preview below:
    - Lighthouse Co Ltd
    - o Make the Font of "Lighthouse" Arial Black and size 88

- Insert a second slide this should be with a layout of Bulleted List
- Write the Text as in preview below
- [Title]: Lighthouse Co Ltd
- [Body]:
  - Mission Statement
  - ii. Company Objectives
  - iii. Management Team
  - iv. Employees
  - v. Sales

Make the Font Color of the Points to Green

Insert a third slide that should be an Organization Chart.

Include the following people in the chart:

- a. David Brent, General Manager
- b. Tim Canterbury, Head of Sales
- c. Gareth Keenan, Assistant to the General Manager
- Dawn Tinsley , Human Resources Manager
   Add a fourth slide and this should be a Table Chart.

The chart should look like the following:

New Products	Discontinued Products
Digital Cameras	8mm Cameras
Ultra Slim Video Camera	8x Zoom Video Camera
25" Plasma TV321"	Black and White TVs
DVD Recorders	Video Players
7.1 Dolby Surround Systems	2 channel stereo systems

 Make the titles New Products and Discontinued Products with a shadow effect and centered in the cell. Widen columns to fit Text as above.

The Fifth slide should be a Chart slide. The chart should be a bar chart, and include
the following data must be used to form the chart:

wing data must c	January	February	March	April
TVa	20	27	90	75
DVDs	30	38	34	31
Wifi equipment	45	46	45	43
Video Recorders	25	29	15	40

- Change the colours of the chart so that the series of bars are red, yellow, pink, and green.
- Add a light coloured background to all slides in the presentation.
- Add also Transition effects between each slide and also different effects for all text and pictures in the presentation.
- Reverse the order of the second and third slides
- Save the presentation as Light House Ltd.

### 2. Do the following:

Load your Presentation Application and start a new presentation

- The first slide is a Title Slide. Select the appropriate layout and enter the title: Annual Food Fair
- Add the subtitle: .A Celebration of Eating
- Insert a small, red circle at the bottom right of the title slide.
- Change the font color for the whole title and subtitle to blue, and apply a text shadow effect just to the words Food and Fair

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Insert a second slide to the presentation, selecting a layout appropriate for a series of bullet points, and using the title: The Menu. Enter the following text:

i. Chocolate Desserts

ii. Cakes and Puddings

iii. Roast Meals

iv. Using Pasta Creatively

Change the line spacing for these bullet points to 1.5 lines.

Increase the font size for the words The Menu in the title.

- Add a footer with your name and the text: Food Fair so they both appear on every slide, and number all the slides. (Make sure the number is not obscured by the red circle on the title slide)
- Insert a third slide, which is to be an organization chart. Use the title Meet The Team. Enter: Maggie Peet, Manager at the top of the chart, and show the following three as reporting to Maggie Peet: Brian Webb, Bookings; Janine Newton, Publicity; Gregg Brown, Accounts

Embolden the text in the title of the third slide, and change the font to Arial.

Apply a light coloured background to all the slides in the presentation

On the third slide, insert an image suitable for the topic of food from an image library. Reduce the size of the image and place it where it will not interfere with

Save the presentation as foodfair.

Print the presentation with three slides per page, and close the presentation.

3. Do the followings:

Load your Presentation Application and start a new presentation

The first slide is a Title Only Slide. Select the appropriate layout and enter the title: Cook Family Cruises.

Add a small blue rectangle at the top left of this slide.

- Change the font color for the whole title to red, and apply a text shadow effect just to the word Cruises.
- Insert a second slide to the presentation, selecting a layout appropriate for a series of bullet points, and using the title: Our Itinerary. Enter the following text:
  - Canary Islands a.
  - Mediterranean Ь.
  - Greek Islands
- Change the line spacing for these bullet points to 2 lines. Increase the font size of the word Itinerary in the title. Add a footer with your name and the text: Cruise Information so they both appear on every slide, and number all the slides.
- Insert a third slide, which is to be a graph. Use the title Our Market Share. Use the following data to produce a pie chart: Cook 54%; Jackson 28%; Wilson 12%; Bennett 5%

Embolden the text in the title of the third slide, and change the font to Arial.

Apply a different background to each slide in the presentation.

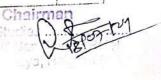
- On the third slide, insert an image suitable for the topic of holidays from an image library. Reduce the size of the image and place it where it will not interfere with
- Add a 4-slide containing nothing but the text; Travel with us for less!!

Save the presentation as a holiday.

Print the presentation with 4 slides per page, and close the presentation.

4. Creating an animation looks like the leaf is falling in a tree.

5. Creating an animation looks like demolishing a world trade center in America.



#### MS-Access

- Create a database named "college" and perform the following tasks:
  - A. Create a table named "student" having following fields:
    Class, Roll no and Name with these Information i.e., Field Name, Data type
    and Description
  - B. Fill at least 5 records.
  - C. Prepare a query to display all records and Name should be in ascending order.
- 2. Create the employee table in MS-Access with the referential integrity-foreign key.

Note: This is a tentative list; the teachers' concern can add more experiment as per requirement.

Keyw Information Technology (IT), Information and Communication Technology (ICT), G-Suite, MS Word, MS ords Excel, MS Power Point, MS-Access.

Signature of Cayvener & Members of CBoS:

Dr HS Flata K

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PART=C: Learning Resources

Text Books, Reference Books and Others

#### Text Books Recommended:

- Computer Fundamentals, P.K. Sinha, BPB Publication, Sixth Edition.
- · Fundamentals of Information Technology, Chetan Shrivastava, Kalyan Publishers.
- Fundamentals of Computers, V. Rajaraman, PHI Sixth Edition.
- Computer Fundamentals and Office Automation, Dr. Santosh Kumar Miri, Iterative International Publisher IIP.
- Computer Fundamentals Architecture and Organization, B. Ram, New Age International Publishers, Fifth Edition.
- · Fundamentals of Information Technology, Alexis Leon and Mathews Leon, Vikash Publication.

#### Reference Books Recommended:

- · Introduction to Information Technology, V. Rajaraman, PHI publication.
- Fundamental of IT, Leon and Leon, Leon Tec world.
- Introduction to Information Technology, Aksoy and Denardis, Cengage learning.
- · Computers Today, Suresh K. Basandra, Galgotia Publications.
- Information Technology The breaking wave, Dennis P.Curtin, Kim Foley, Kunai Sen and Cathleen Morin, TMH.
- OFFICE 2013 in Simple Steps, Kogent Solution Inc., DremTech Press.
- Access 2010 in Simple Steps by Kogent Learning Solutions Inc.

#### Online Resources:

- Introduction to Computer Fundamental from W3school: https://www.w3schools.blog/computer-fundamentals-tutorial
- Introduction to MS-Word from W3school:
  - https://www.w3schools.blog/ms-word-tutorial
- Introduction to MS-Excel from W3school;
  - https://www.w3schools.com/excel/excel introduction.php

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- Introduction to MS-PowerPoint from W3school: https://www.w3schools.blog/powerpoint-tutorial
- Introduction to MS-Access from W3school:

https://www.w3schools.com/sql/sql\_ref\_msaccess.asp

Fundamentals of Computers & Information Technology (in Hindi):

https://www.mcu.ac.in/wp-content/uploads/2020/04/1PGDCA1-Unit-I-Fundamentals-of-

Computers-Information-Technology.pdf.

Fundamentals of Computers & Information Technology (in Hindi):

https://hte.rajasthan.gov.in/dept/dte/board of technical education, rajasthan/government polyte chnic college hanumangarh/uploads/doc/fundamental- final-rkd.pdf.

Information and Computers

Technology: https://cbseacademic.nic.in/web\_material/doc/2014/11\_ICT-IX.pdf.pdf.

Microsoft Office (in Hindi):

https://www.scribd.com/document/534988849/9-Microsoft-office-in-hindi-www-GkNotesPDFcom.

MS-OFFICE:

https://www.rgycsm.org/uploads/books/MICROSOFT-OFFICE-BOOK.pdf.

MS-OFFICE:

Hindi Notes: https://www.copaguide.com/2020/04/ms-office-topics.html.

Microsoft Office Full Crash Course:

https://www.youtube.com/watch?v=SH4oyV5AJ6A

Suggested Continuous E	valuation Methods:	
Maximum Marks:	50 Marks	
Continuous Internal Ass End Semester Exam (ES	E): 35 Marks	Cil Tout I
Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test / Quiz-(2): 10 & 10 Assignment/Seminar + Attendance - 05 Total Marks - 15	Better marks out of the two Test / Quiz + obtained marks in Assignmer shall be considered against 15 Mark
End Semester Exam (ESE):	Laboratory / Field Skill Performance: On spot Assessment A. Performed the Task based on lab. wo B. Spotting based on tools & technology Viva-voce (based on principle/technology	rk - 20 Marks as per lab. (written) - 10 Marks status

Name and Sanature of Convener & Members of CBoS;

(wrest theken)

Dr. H.57-1649

ANTETA KUJUR

Nandkuma ilaya, Raigarh (C

# FOUR YEAR UNDERGRADUATE PROGRAM (2024 – 28) DEPARTMENT OF INFORMATION TECHNOLOGY COURSE CURRICULUM

PA	AKI	- A: Introduc	ction	E CURRICULU						
		m: Bachelor in S		Semester - II						
(Ce	ertificate / Diploma / D		gree/Honors)	Semester - II	Session: 2024-20	025				
1	Co	urse Code	ITSC-02T		A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
2	Co	urse Title	Programming in C+	+						
3	Co	urse Type	DSC (Discipline Spe	Discipline Specific Course)						
4	Pre	erequisite	As per program	and of this course, the students will be able to:						
5		urse Learning. tcomes (CLO)	<ul> <li>Understand the</li> <li>Write programs</li> <li>Define function</li> <li>Write programs</li> </ul>	se, the students will be a fundamentals of object s related to concept of olds. class and to create ow s for file handling, programs to solve real	oriented programming.  pject oriented program  vn Libraries.					
6	Cr	edit Value 3 Credits Credit = 15 Hours - Learning & Observation								
7_	To	tal Marks	Max. Marks:	100	Min Passing Marks:	10				
PΑ	RT	-B: Conte	nt of the Cours	se						
	_	Total Noof Tea	ching-Eearning Per	iods (01 Hr. per peri	od) - 45 Periods (45 Ho					
Uı	nit		Topic	s (Course contents	)	No. of Period				
		Testing, Debugging Structure of C pr Operators, Data Ty Precedence and As	g, Linker and Loader, A ogram, C Tokens: ypes, Control structure isociativity, Array and functions, function pro-	Algorithms, Flow Chart Identifiers, Keyword Conditional and loop its types, Pointer, Fun	er, Interpreter, Compiler, s, History of C language, s, Constants, Variables, ing statements, Operator ctions: Standard Library e and Call by reference,	12				
I	1	Introduction to programming, Feat objects, Access Spe	Object Oriented Fures of C++, Structure ecifiers: Private, Public	Programming: Conco of C++ program, Data , Protected, inline funct	opt of object oriented types, structure, class and tions, static data and static	11				
Ī	II	functions. Constructor: Default constructor, Copy constructor, Parameterized constructor, Destructor.  Inheritance and Polymorphism: Definition, Concept of base and derived class, Types of Inheritance: Single, Multilevel, Multiple, Hierarchical and Hybrid Inheritance. Polymorphism: Definition, Compile time polymorphism: Function overloading, Operator overloading, constructor overloading, Runtime polymorphism: Virtual Function, pure virtual function. Inline function, friend function, friend class.								
ľ	V									
	ords	Template.		n, Class, Object, Polym	orphism, Inheritance, Const	ructor,				
JF.	11:5	rman C	Jal Jan	Ams gran	That en)	ANJ				

# PART-C: Learning Resources

Text Books, Reference Books and Others

## Text Books Recommended:

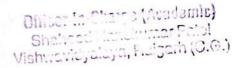
- Peter Juliff, Program Design, PHI Publications.
- Yashwant Kanetkar, Let us C: BPB Publications.
- E. Balaguruswamy, Programming in ANSI C, Tata McGraw Hill

## Reference Books Recommended:

- Y. Kanetkar, Let us C++, B.P.B Publication.
- E. Balaguruswamy, Programming in C++, Tata McGraw Hill.
- R. Kumar, Object Oriented Programming with C++, Prakhar Publication(Hindi)
- Dhupiya, Lakhyani, C++ Programming Alka Publications, Ajmer (Paperback, Dhupiya, Lakhyani)(Hindi)

#### Online Resources:

- Introduction to C and C++ from SWAYAM/NPTEL
   https://onlinecourses.nptel.ac.in/noc22\_cs103/preview
   https://www.youtube.com/watch?v=KG4hjVDw-p8&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=2
- Constant-and Inline Function through NPTEL:
   https://www.youtube.com/watch?v=pX6LufLso2M&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=10
- Pointer and Reference NPTEL https://www.youtube.com/watch?v=GtsBZ5e1-cE&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=12
- Function Overloading NPTEL https://www.youtube.com/watch?v=uJGmGAShHeU&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=13
- Operator Overloading NPTEL https://www.youtube.com/watch?v=0jpOwe4d-FE&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=17
- Dynamic Memory Management NPTEL https://www.youtube.com/watch?v=lkFK2X6qIc0&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=18
- Class and Object NPTEL
   https://www.youtube.com/watch?v=wtuks\_f3vP4&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=24
- Access Specifiers NPTEL
   https://www.youtube.com/watch?v=6ki\_W7cXdM0&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=22
- Constructor and Destructor NPTEL
   https://www.youtube.com/watch?v=wtuks\_f3vP4&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=24
- C++ different topics from W3School https://www.w3schools.com/CPP/default.asp
- C++ different topics from Javatpoint https://www.javatpoint.com/cpp-tutorial





PART -D: Assessment and Evaluation Suggested Continuous Evaluation Methods: Maximum Marks: 100 Marks Continuous Internal Assessment (CIA): 30 Marks End Semester Exam (ESE): 70 Marks Better marks out of the two Test / Quiz + Continuous Internal Internal Test / Quiz-(2): 20 +20 obtained marks in Assignment shall be Assignment / Seminar -Assessment (CIA): considered against 30 Marks Total Marks -30 (By Course Teacher) Two section - A & B End Semester Exam Section A: Q1. Objective - 10 x1= 10 Mark; Q2. Short answer type- 5x4 -20 Marks (ESE): Section B: Descriptive answer type qts., 1 out of 2 from each unit-4x10=40 Marks Name and Signature of Convener & Members of CBoS: Dr. Astrona check men ANJECTA

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Si Officer In-Charge (Adinbumle)
Vish Shalicod Candrumar Fold
Vishwavidyalaya, Ruigarh (O.G.)

# FOUR YEAR UNDERGRADUATE PROGRAM (2024 – 28) DEPARTMENT OF INFORMATION TECHNOLOGY COURSE CURRICULUM

		DEP	ARTMENT OF COURS	INFORMATION T SE CURRICULUI	ECHNOLOGY		
PAI	RT- A	: Introduc		- COMMICCION	-		
		Bachelor in Sc / Diploma / Degre		Semester - II	Session: 2024-2	:025	
I	Cou	rse Code	ITSC-02P				
2	Cou	rse Title	Lab 2: Progra	mming in C++			
3	Cou	rse Type	Practical				
4	Pre	Prerequisite As per program					
5	Course Learning Outcomes (CLO)  Cunders which a Code. It using the Write results allocate passing a Development of the Code. It using the Code. It uses the Code. It			essential to create good Cot, and implement a well-st C++ programming languages able modules (collections and design/implementation and binding, control file	mming concepts and metho programs. rectured, robust computer 30.	program variable parameter	
6		edit Value	1 Credits	Tredit =30 Hours Labora	atory or Field Learning Trainin		
7		tal Marks	Max. Marks		lin Passing Marks:	20	
PAI	RT -E	3: Content					
		Total No. of	learning-Traini	ng/performance Period	ds: 30 Periods (30 Hour		
	dule		Topics (Course contents)		No. of Period		
Pra Expe	st of etical criment	<ol> <li>Write a progusing do – w</li> <li>Write a progusing do – w</li> <li>Write a progustatements.</li> <li>Write a progustatements.</li> </ol>	ram in C++ to fin gram in C++ to fi hile loop. gram in C++ for w gram in C++ for M	dition of two numbers und the biggest number better ind the factorial value of arrious arithmetic operations of two 3X3 are five books of informations.	tween two numbers.  If any entered number tions using switch case matrices.	The state of the state of the state of	

7. Write a program in C++ to store six employee information using union. 8. Write a program in C++ to calculate simple interest using call by value and call by reference method. 9. Write a program in C++ to find the sum and average of five numbers using 30 class and objects. 10. Write a program in C++ to multiply two numbers using private and public member functions. 11. Write a program in C++ to print structure like this using scope resolution operator 12 123 1234 12345 12. Write a program in C++ for constructor and Destructor. 13. Write a program in C++ for multiple inheritance.

Officer in Charts (Factoring)
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Vishi, evicydaya, Falgalia (J.C.)

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14. Write a program in C++ for operator overloading. 15. Write a program in C++ for friend class and friend function. 16. Write a program in C++ for virtual function and virtual class. 17. Write a program in C++ for Exception Handling. 18. Write a program in C++ to open and close a file using file Handling. 19. Given two ordered arrays of integers, write a program to merge the two-arrays to get an ordered array. 20. WAP to display Fibonacci series (i) using recursion, (ii) using iteration 21. WAP to calculate Factorial of a number (i) using recursion, (ii) using 22. WAP to calculate GCD of two numbers (i) with recursion (ii) without recursion. 23. Create a Matrix class using templates. Write a menu-driven program to perform following Matrix Operations (2-D array implementation): a) Sum b) Difference c) Product d) Transpose 22. Create the Person class. Create some objects of this class (by taking information from the user). Inherit the class Person to create two classes Teacher and Student class. Maintain the respective information in the classes and create, display and delete objects of these two classes (Use Runtime Polymorphism). 24. Create a class Triangle. Include overloaded functions for calculating area. Overload assignment operator and equality operator. 25. Create a class Box containing length, breadth and height. Include following methods in it: a) Calculate surface Area b) Calculate Volume c) Increment, Overload ++ operator (both prefix & postfix) d) Decrement, Overload -operator (both prefix & postfix) e) Overload operator == (to check equality of two boxes), as a friend function f) Overload Assignment operator g) Check if it is a Cube or cuboid 26. Create a structure Student containing fields for Roll No., Name, Class, Year and Total Marks. Create 10 students and store them in a file. 27. Write a program to retrieve the student information from the file created in the previous question and print it in the following format: Roll No. Name 28. Copy the contents of one text file to another file, after removing all whitespaces. 29. Write a program for exception handling. 30. Write a program to insert data into file and to display it. Note: Concerned teacher can add additional practical exercises as per requirement. Array, Function, Structure, union, matrix, constructor, destructor, inheritance. Keywords Signature of Convener & Members of CBoS: (Chairman Learning Resources Text Books, Reference Books and Others Text Books Recommended: Peter Juliff, Program Design, PHI Publications. Yashwant Kanetkar, Let us C: BPB Publications. E. Balaguruswamy, Programming in ANSI C, Tata McGraw Hill Reference Books Recommended:

E. Balaguruswamy, Programming in C++, Tata McGraw Hill. Office: La Charos (Academie) Shahoodi tanulamar Falid Vishvicricyalaya, Fielgath (O.C.)

Y. Kanetkar, Let us C++, B.P.B Publication .

- R. Kumar, Object Oriented Programming with C++, Prakhar Publication(Hindi)
- Dhupiya, Lakhyani , C++ Programming Alka Publications, Ajmer (Paperback, Dhupiya, Lakhyani)(Hindi)

#### Online Resources:

- Introduction to C and C++ from SWAYAM/NPTEL https://onlinecourses.nptel.ae.in/noc22\_cs103/preview https://www.youtube.com/watch?v=KG4hjVDw-p8&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=2
- Constant and Inline Function through NPTEL: https://www.youtube.com/watch?v=pX6LuILso2M&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNe6D2&index=10
- Pointer and Reference NPTEL https://www.youtube.com/watch?v=GtsBZ5e1-cE&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=12
- Function Overloading NPTEL https://www.youtube.com/watch?v=uJGmGAShHeU&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=13
- Operator Overloading NPTEL https://www.youtube.com/watch?v=0jpOwe4d-FE&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=17
- Dynamic Memory Management NPTEL https://www.youtube.com/watch?v=lkFK2X6qlc0&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=18
- Class and Object NPTEL https://www.youtube.com/watch?v=wtuks\_GvP4&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=24
- Access Specifiers NPTEL https://www.youtube.com/watch?v=6ki\_W7cXdM0&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=22
- Constructor and Destructor NPTEL https://www.youtube.com/watch?v=wtuks\_f3vP4&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=24
- C+++ different topics from W3School https://www.w3schools.com/CPP/default.asp
- C++ different topics from Javatpoint https://www.javatpoint.com/cpp-tutorial

Suggested Continuous	Evaluation Methods:	
Maximum Marks:	50 Marks	
Continuous Internal A End Semester Exam (		
Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test / Quiz-(2): 10 & 10 Assignment/Seminar + Attendance - 05 Total Marks - 15	Better marks out of the two Test / Quiz     obtained marks in Assignment shall be considered against 15 Marks
End Semester Example (ESE):	A. Performed the Task based on lab. B. Spotting based on tools & technol C. Viva-vdce (based on principle/tect	ogy (written) – 10 Marks   Course teacher   as per lab.

Dr. MS. Hota Ka Charman

# FOUR YEAR UNDERGRADUATE PROGRAM (2024 – 28) DEPARTMENT OF INFORMATION TECHNOLOGY COURSE CURRICULUM

			Cour	SE CURRICULUM			
P	ART	- A: Introdu	uction				
		m: Bachelor in Sc ate / Diploma / De	100	Semester - 1	Session: 2024-202	.5	
		rse Code	ITGE-01T	deres year and the man make the committee of the analysis of the committee			
2	Cor	rse Title	Fundamental of	IT and MS-Office			
3		rrse Type		Generic Elective)			
4		requisite	As per program	A			
5	Cı	urse Learning. tcomes (CLO)	Develop information technology solutions by evaluating user require in advance trends of IT.  Acquire knowledge of MS-Excel, MS-PowerPoint and MS-Access.  Acquire knowledge of MS-Excel, MS-PowerPoint and MS-Access.				
7		tal Marks	Max. Marks:	100	1		
P	ART	-B: Conter	nt of the Cou	Projects (01 Hr. per D	eriod) - 45 Periods (45 Ho	urs)	
Total No. of Teaching-Learning Periods (01 Hr. per period) - 45 Period Topics (Course contents)				4	No. 0 Perio		
Unit I		Historical eviden Katapayadi system and numerical ma Introduction to C Anatomy of Coneach Unit, Memo System Software Language, Assedisadvantages, Lefundamental of Application of IT Advanced Trend Nanotechnology, Intelligence (AI) Suite, Gol digital Academic Depos	ce, Salient aspect m, pingala and the athematics. Computer: History nputer: Block Diag ory: Primary, Cac and Application So embly Language, anguage Processor Information Tec. What is ICT?, C ds in IT: Cloud Te Virtual Reality, Machine Learning i initiatives in high sitory, National Di TEL.	binary system, Sulbha so of computer, Generation gram, Central Processing the, Flash, Software and oftware, Types of Program, High Level Languages/Translators: Assemble thrology: Data and Infomponents of ICT, Impact Components of India, Internet grant Components of India, Edital Library of India, Edital Librar	of Things (IoT), Artificial ag, Quantum Computing, G-1, Swayam Prabha, National S-Sodh-Sindhu, Virtual labs	12	
		new document Setting fonts, Pa Heading2, Title special. Insert T Art, Equation an (indent and space	r, Saving documents agraph settings, Strong), Find of Sab: Pages, Tables d Symbols. Page I ing). Mailing Tab	Various styles (Norma & Replace, Format pais, Pictures, Clipart, Sha ayout Tab: Page setup,	and its features, Creating ng documents. Home Tab I, No spacing, Heading I inter, Copy paste and paste pes, Header & Footer, Word Page Background, Paragraph Labels, Mail Merge. Review otect document, View Tab Switch window).	11 11	

Officer In-Charge (Avademic)
Shaheed Hendhumar Fefel
Vishvævidyaleya, Flatgerh (C.G.)

MS-Excel: Introducing Excel, Use of Excel sheet, creating new sheet, Saving, Opening, III and Printing workbook. Home Tab: Font, Alignment, Number, Styles and cells and editing, Conditional Formatting. Insert Tab: Table, Charts (column chart, Pie chart, Bar chart, Line chart) and Texts (header & footer, word art, signature line). Page Layout Tab: Page setup options, Scale to fit (width, height, scale). Formulas Tab: Auto sum (sum, 11 average, min, max), Logical (IF, and, or, not, true, false), Math & Trig (sin, cos, tan, ceiling, floor, fact, mod, log), Sort and Filter options, Data validation, Group and ungroup. Review Tab: Protect sheet, Protect workbook, and Share workbook. View Tab: Page breaks, Page layout, Freezing Panes, Split and hide. IV Working with PowerPoint and MS-Access PowerPoint: Introducing PowerPoint, Use of PowerPoint presentation, Creating new slides saving, Opening and printing. Home Tab: New slide, Layout, Reset, Delete, Setting text direction, Align text, Convert to smart art, Drawing options. Insert Tab: Table, Picture, Clipart, Photo album, Smart art, Shapes and chart, Movie and sound, Hyperlink and action, Text box, Word art, Object. Design Tab: Page setup options, Slide orientation, Applying various themes, Selecting background style and formatting it. 11 Animations Tab: Custom animation for entrance, Exit and emphasis, Applying slide transition, Setting transition speed and sound, Animation on rehearse timing. Slideshow & View Tab: Start slide, Show options, and Setup options. View tab: Presentation views, Colors and Window option. MS-Access: Introduction to DBMS, features of DBMS, creating blank databases, Saving it in accelb format, Defining data type in MS Access, Creating tables, creating Information Technology (IT), Information and Communication Technology (ICT), G-Suite, MS Word, reports, query wizard. MS Excel, MS Power Point, MS-Access. Name and Signature of Convener & Members of CBoS.

# PART-C: Learning Resources

Text Books, Reference Books and Others

## Text Books Recommended:

- Computer Fundamentals, P.K. Sinha, BPB Publication, Sixth Edition.
- Fundamentals of Information Technology, Chetan Shrivastava, Kalyan Publishers.
- Fundamentals of Computers, V. Rajaraman, PHI Sixth Edition.
- Computer Fundamentals and Office Automation, Dr. Santosh Kumar Miri, Iterative International Publisher IIP.
- Computer Fundamentals Architecture and Organization, B. Ram, New Age International Publishers, Fifth Edition.
- Fundamentals of Information Technology, Alexis Leon and Mathews Leon, Vikash Publication.

### Reference Books Recommended:

- Introduction to Information Technology, V. Rajaraman, PHI publication.
- Fundamental of IT, Leon and Leon, Leon Tec world.
- Introduction to Information Technology, Aksoy and Denardis, Cengage learning.
- Computers Today, Suresh K. Basandra, Galgotia Publications.

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Officer In Charge (Avademic) Shelvese Handmimer Fatal Vishwavidyalaya, Raigath (C.G.)

- Information Technology The breaking wave, Dennis P.Curtin, Kim Folcy, Kunai Sen and Cathleen Morin, TMH.
- OFFICE 2013 in Simple Steps, Kogent Solution Inc., DremTech Press.
- Access 2010 in Simple Steps by Kogent Learning Solutions Inc.

### Online Resources:

- Introduction to Computer Fundamental from W3school: https://www.w3schools.blog/computer-fundamentals-tutorial
- Introduction to MS-Word from W3school: https://www.w3schools.blog/ms-word-tutorial
- Introduction to MS-Excel from W3school: https://www.w3schools.com/excel/excel introduction.php
- Introduction to MS-PowerPoint from W3school: https://www.w3schools.blog/powerpoint-tutorial
- Introduction to MS-Access from W3school: https://www.w3schools.com/sql/sql\_ref\_msaccess.asp
- Fundamentals of Computers & Information Technology (in Hindi): https://www.mcu.ac.in/wp-content/uploads/2020/04/1PGDCA1-Unit-I-Fundamentals-of-Computers-Information-Technology.pdf.
- Fundamentals of Computers & Information Technology (in Hindi): https://hte.rajasthan.gov.in/dept/dte/board of technical education. rajasthan/government poly technic college hanumangarh/uploads/doc/fundamental- final-rkd.pdf.
- Information and Computers Technology: https://ebseacademic.nic.in/web\_material/doc/2014/11\_ICT-IX.pdf.pdf.
- Microsoft Office (in Hindi): https://www.scribd.com/document/534988849/9-Microsoft-office-in-hindi-www-GkNotesPDFcom.
- MS-OFFICE: https://www.rgycsm.org/uploads/books/MICROSOFT-OFFICE-BOOK.pdf.
- MS-OFFICE: Hindi Notes: https://www.copaguide.com/2020/04/ms-office-topics.html.
- Microsoft Office Full Crash Course:

Vishv.avidyalaya, Hulgath (C.G.)

<ul> <li>Microsoft Office F https://www.youtu</li> </ul>	the.com/watch!?v=SH4oyV5AJ6A	
PART -D: Assess	sment and Evaluation	
Suggested Continuous Maximum Marks:	100 Marks	
Continuous Internal As End Semester Exam (E	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test / Quiz-(2): 20 +20 Assignment / Seminar - 10 Total Marks - 30	Better marks out of the two Test / Quiz obtained marks in Assignment shall be considered against 30 Marks
Evan (ESE). Sec		rk: Q2. Short answer type- 5x4 = 20 Marks out of 2 from each unit-4x10=40 Marks
	Convener & Members of CBoS:	Sal gring Anjeda K
	gio tivi gia	Jectrula Jerry

# FOUR YEAR UNDERGRADUATE PROGRAM (2024 – 28) DEPARTMENT OF INFORMATION TECHNOLOGY COURSE CURRICULUM

	ADT A. I.A.		CURRICULUM		Mr. Park Change
P	ART- A: Intro rogram: Bachelor in Pertificate / Diploma /	Science (II)	Semester - 1	Session: 2021-20	025
1	Course Code	ITGE-01P			
2	Course Title	Lab 1: MS-Office			
3	Course Type	Practical			
1	Prerequisite	As per program			
5	Course Learning. Outcomes (CLO)	Gain Practical kn     Organize files an     Acquire knowled     Develop informa advance trends o     Acquire knowled	ge of MS-Excel, MS-Power	ices. ications. evaluating user require Point and MS-Access.	
6	Credit Value	1 Credits Credit =.	30 Hours Laboratory or	Field Learning/Train	ning
7	Total Marks	Max. Marks: 50	Min Passing Marks	: 20	
	Spam and Tras  2. How to design 3. How to create of the design of the de	Google form? Write the sidifferent student classes in ers create assignments at find assignments, due could be media platforms like to the spreadsheets, Google spreadsheets, Google	Write the uses of Inbox, Sateps with appropriate wire Google classroom, and provide due dates, of dates, or grades in Google witter, Facebook and You Slickr, Skype, yahoo and Solides and Google form	ndows, or grades in Google or Classroom? orTube? WhatsApp? s?	30 Hrs
	9. How to share Bluetooth.	mes between modile	phone and computer s	ystem/Laptop using	

Officer In-Charge (Academic) Shaheed Nandhumar Petel Vishwevidyalaya, Fielgath (C.G.)



Leave a gap of 12-points after the title.

2. Create a telephone directory,

The heading should be16-point Arial Font in bold.

The rest of the document should use10-point font size.

Other headings should use10-point Courier New Font.

The footer should show the page number as well as the date last updated.

3. Design a time-table form for your college.

- The first line should mention the name of the collegein 16-point Arial Font and should be bold.
- The second line should give the course name/teacher's name and the department in 14-point Arial.

Leave a gap of 12-points.

> The rest of the document should use10-point Times New Roman font.

- > The footer should contain your specifications as the designer and date of creation.
- XYZ Publications plan store lease an e-book design dapper your syllabus. Design the First page of the book as per the given specifications.

The title of the book should appearinboldusing20-pointArialfont.

> The name of the author and his qualifications should be in the center of the page in 16-point Arial font.

At the bottom of the document should be the name of the publisher and address in 16-point Times New Roman.

The details of the offices of the publisher (only location) should appear in the footer.

5. Create the following one page documents.

- > Compose a note inviting friends together at your house, including a list of things to bring with them.
- Design a certificate in landscape orientation with a border around the document.

> Design a Garage Sale sign.

Make an assignment outlining your rules for your bedroom at home, using a numbered list.

6. Create the following documents:

- A newsletter with a headline and 2 columns in portrait orientation, including at least one image surrounded by text.
- Use a newsletter format to promote upcoming projects or events in your classroom or college.
- Convert following text to a table, using comma as delimiter Type the following as shown (do not bold).

Color, Style, Item Blue, A980, Van Red, X023, Car Green, YL724, Truck Name, Age, Sex Bob, 23, M Linda, 46, F Tom, 29, M

8. Enter the following data into a table given on the next page.

300000

Salesperson	Dolls	Trucks	Puzzles
Kennedy, Sally	1327	1423	1193
White, Pete	1421	3863	2934
Pillar, James	5214	3247	5467
York, George	2190	1278	1928
Banks, Jennifer	1201	2528	1203
Atwater, Kelly	4098	3079	2067
Pillar, James	5214	3247	5467
York, George	2190	1278	1928
Banks, Jennifer	1201	2528	· 1203
Atwater, Kelly	4098	3079	. 2067

Add a column Region (values: S, N, N, S, S, S) between the Salesperson and Dolls columns to the given table Sort your table data by Region and within Region by Sales person in ascending order:

In this exercise, you will add a new row to your table, place the word Total at the bottom of the Sales person column, and sum the Dolls, Trucks, and Puzzles

- 9. Wrapping of-text around-the-image.
- 10. How to install MS-Office in Windows operating system.
- 11. How to convert word, excel and PowerPoint into pdf & pdf to word.
- 12. How to merge and split pdf files.

### MS-Excel

1. Enter the Following data in Excel Sheet

1/2/10/2007	Otal	Qtr2	Qtr3	ES PROJE Qtr4	Qtr Total	Rate Amoun
State	Qtrl	-	2100	3000	15	
Delhi	2020	2400	1500	1400	20	
Punjab	1100	1300		2800	17	
U.P.	3000	3200	2600		15	
Haryana	1800	2000	2200	2700		
Rajasthan	2100	2000	1800	2200	20	
TOTAL						
AVERAGE						

a. Apply Formatting as follow:

Title in TIMES NEW ROMAN

FontSize-14

Remaining text-ARIAL, FontSize-10

State name and Qtr. Heading Bold, Italic with Gray Fill Color.

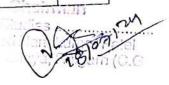
Numbers in two decimal places.

Qtr. Heading in center Alignment.

Apply Border to whole data.

- b. Calculate State and Qtr. Total
- Calculate Average for each quarter

Officer to Charge (Avademic) Sheheed Hanckumar Pakel Vishwavid, alaya, Reigarh (O.G.)



- d. Calculate Amount=Rate\*Total.
- 2. Given the following worksheet

Α		В	С	D
1	Roll No.	Name	Marks	Grade
2	1001	Sachin	99	
3	1002	Sehwag	65	
4	1003	Rahul	41	
5	1004	Sourav	89	
6	1005	Harbhajan	56	

Calculate the grade of these students on the basis of following guidelines:

If Marks	Then Grade
>=80	A+
>= 60 and <80	Α
>= 50 and <60	В
<50	F

3. Given the following worksheet

	A	В	С	D	E	F_	G
1	Salesman		Sa	les in(Rs	.)		
2	No.	Qtr1	Qtr2	Qtr3	Qtr4	Total	Commission
3	S001	5000	8500	12000	9000		
4	S002	7000	4000	7500	11000		
5	S003	4000	9000	6500	8200		
6	S004	5500	6900	4500	10500		
7	S005	7400	8500	9200	8300		
8	S006	5300	7600	9800	6100		

Calculate the commission earned by the salesman on the basis of following Candidates:

If Total Sales	Then Commission
<20000	0% of sales
> 20000 and < 25000	4% of sales
> 25000 and < 30000	5.5% of sales
> 30000 and < 35000	8%of sales
>=35000	11% of sales

The total sales are the sum of sales of all the four quarters.

- 4. Company XYZ Ltd. pays a monthly salary to its employees who consist of basic salary, allowances & deductions. The details of allowances and deductions are as follows:
  - HRA Dependent on Basic
     30% of Basic if Basic<=1000</li>
     25% of Basic if Basic>1000 & Basic<=3000</li>
     20% of Basic if Basic>3000
  - DA Fixed for all employees,30% of Basic
  - Conveyance Allowance(CA)





Rs.50/- if Basic is <=1000

Rs.75/- if Basic > 1000 & Basic <= 2000

Rs.100 if Basic>2000

Entertainment Allowance (EA)

NIL if Basic is<=1000

Rs.100/-if Basic > 1000

#### Deductions

 Provident Fund 6% of Basic

• Group Insurance Premium

Rs.40/-if Basic is <=1500

Rs.60/-if Basic > 1500 & Basic <= 3000

Rs.80/-if Basic>3000

Calculate the following:

Gross Salary=Basic +HRA+ DA+ CA+ EA

Total Deduction=Provident Fund + Group Insurance Premium

Net Salary=Gross Salary-Total Deduction

5. Create Payment Table for a fixed Principal amount, variable rate of interests and time in the form at below:

				1
5%	6%	7%	8%	9%
XX	XX	XX	XX	XX
XX	XX	XX	XX	XX
2000000	XX	XX	XX	XX
	XX	XX	XX	XX
	10000000	XX XX XX XX XX XX	XX	XX

6. Use an array formula to calculate Simple Interest for given principal amounts given the rate of Interest and time

8%
5Years
Simple Interest
?
?
?

7. The following table gives a year wise sale figure of five salesmen in Rs.

2019	2020	2021	2022
	12000	20000	50000
	18000	50000	60000
	22000	70000	70000
		100000	80000
	45000	125000	90000
	2019 10000 15000 20000 30000 40000	10000     12000       15000     18000       20000     22000       30000     30000	10000         12000         20000           15000         18000         50000           20000         22000         70000           30000         30000         100000

- a. Calculate total sale year wise.
- b. Calculate the net sale made by each salesman
- c. Calculate the maximum sale made by the salesman
- d. Calculate the commission for each salesman under the condition.

Office: La Charge (Avademic) Sheirest Lembrumer Petel Vishvisvis, alaya, Luigath (C.G.) Story (C)

- >> If total sales > 4, 00,000 give 5% commission on total sale made by the salesman.
- >> Otherwise give 2% commission.
- c. Draw a bar graph representing the sale made by each salesman.
- f. Draw a pie graph representing the sale made by a salesman in 2000.
- 8. Enter the following data in Excel Sheet

PERSONAL BUDGET FOR FIRST QUARTER

Monthly Income(Net): 1,475

EXPENSES	JAN	FEB	MARCH QUARTER TOTAL	QUARTER AVERAGE
Rent	600.00	600.00	600:00	
Telephone	48.25	43.50	60.00	
Utilities	67.27	110.00	70.00	
Credit Card	200.00	110.00	70.00	
Oil	100.00	150.00	90.00	
AV to Insurance	150.00			
Cable TV	40.75	40.75	40.75	
Monthly Total				

- a. Calculate Quarter total and Quarter average.
- b. Calculate Monthly total.
- c. Surplus=Monthly income-Monthly total.
- d. What would be the total surplus if monthly income is 1500.
- e. How much does the telephone expense for March differ from quarter average?
- f. Create a 3D column graph for telephone and utilities.
- g. Create a pie chart for monthly expenses.
- 9. Enter the following data in Excel Sheet

## TOTAL REVENUE EARNED FOR SAM'S BOOK STALL

Publisher Name	1997	1998	1999	2000	Total
- Santa Carried and The Carried Broken Street	Rs. 1,000.00	Rs. 1100.00	Rs. 1,300.00	Rs. 800.00	1
В	Rs. 1,500.00	Rs. 700.00	Rs. 1,000.00	Rs. 2,000.00	
С	Rs. 700.00	Rs. 900.00	Rs. 1,500.00	Rs. 600.00	
D	Rs. 1,200.00	Rs. 500.00	Rs. 200.00	Rs. 1,100.00.	

- a) Compute the total revenue earned.
- b) Plot the line chart to compare the revenue of all publishers for 4 years.
- c) Chart Title should be Total Revenue of Sam's Book stall(1997-2000)'
- d) Give appropriate categories and value axis title.
- Generate 25 random numbers between 0 & 100 and find their sum, average and count. How many no. are in the range 50-60.

#### MS-Power Point

- 1. Do the following task:
  - · Start a new blank presentation
  - · Your first Slide is going to be a Title Slide
  - Write the Text as in the preview below:

Ohruchia: filminata (Avarlamis) Shahadi Kamukumar Fe'al Vishvavlayalaya, Falgarh (C.C.) Blog Palel

- >> If total sales > 4, 00,000 give 5% commission on total sale made by the salesman.
- >> Otherwise give 2% commission.
- e. Draw a bar graph representing the sale made by each salesman.
- f. Draw a pie graph representing the sale made by a salesman in 2000.
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Credit Card	200.00	110.00	70.00	
Oil	100.00	150.00	90.00	
AV to Insurance	150.00			
Cable TV	40.75	40.75	40.75	
Monthly Total				

- a. Calculate Quarter total and Quarter average.
- b. Calculate Monthly total.
- c. Surplus=Monthly income-Monthly total.
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В	Rs. 1,500.00	Rs. 700.00	Rs. 1,000.00	Rs. 2,000.00	
C	Rs. 700.00		Rs. 1,500.00	Rs. 600.00	
D	Rs. 1,200.00	Rs. 500.00	Rs. 200.00	Rs. 1,100.00.	

- a) Compute the total revenue earned.
- b) Plot the line chart to compare the revenue of all publishers for 4 years.
- c) Chart Title should be Total Revenue of Sam's Book stall(1997-2000)
- d) Give appropriate categories and value axis title.
- Generate 25 random numbers between 0 & 100 and find their sum, average and count. How many no. arc in the range 50-60.

#### MS-Power Point

- 1. Do the following task:
  - Start a new blank presentation
  - Your first Slide is going to be a Title Slide
  - Write the Text as in the preview below:

Blog Parc

o Lighthouse Co Ltd

o Make the Font of "Lighthouse" Arial Black and size 88

- Insert a second slide this should be with a layout of Bulleted List
- Write the Text as in preview below
- [Title]: Lighthouse Co Ltd
- [Body]:
  - Mission Statement i.
  - Company Objectives ii.
  - Management Team iii.
  - Employees iv.
  - Sales V.

Make the Font Color of the Points to Green

Insert a third slide that should be an Organization Chart.

Include the following people in the chart:

- a. David Brent, General Manager
- b. Tim Canterbury, Head of Sales
- c. Gareth Keenan, Assistant to the General Manager
- d. Dawn Tinsley, Human Resources Manager

Add a fourth slide and this should be a Table Chart.

The chart should look like the following:

ontinued Products  1 Cameras  1 Com Video Camera
Tideo Camera
oom video carri
k and White TVs
o Players
annel stereo systems
Ċ

Make the titles New Products and Discontinued Products with a shadow effect and

centered in the cell. Widen columns to fit Text as above. The Fifth slide should be a Chart slide. The chart should be a bar chart, and include

the following data must be used to form the chart:

owing data must b	January	February	March	April
		27	90	75
TVs	30	38	34	.31
DVDs	45	46	45	43
Wifi equipment Video Recorders	25	29	15	40

- Change the colours of the chart so that the series of bars are red, yellow, pink, and
- Add a light coloured background to all slides in the presentation.
- Add also Transition effects between each slide and also different effects for all text and pictures in the presentation.
- Reverse the order of the second and third slides
- Save the presentation as Light House Ltd.
- Do the following:

Load your Presentation Application and start a new presentation

- The first slide is a Title Slide. Select the appropriate layout and enter the title: Annual Food Fair
- Add the subtitle: .A Celebration of Eating
- Insert a small, red circle at the bottom right of the title slide.

Officer in Charge (Auadamic) Shaliped Landlumar Feloi Vishvravicyalcya, Reigarh (O.G.)

- Change the font color for the whole title and subtitle to blue, and apply a text shadow effect just to the words Food and Fair
- Insert a second slide to the presentation, selecting a layout appropriate for a series of bullet points, and using the title: The Menu. Enter the following text:
  - i. Chocolate Desserts
  - ii. Cakes and Puddings
  - iii. Roast Meals
  - iv. Using Pasta Creatively
- Change the line spacing for these bullet points to 1.5 lines.
- Increase the font size for the words The Menu in the title.
- Add a footer with your name and the text: Food Fair so they both appear on every slide, and number all the slides. (Make sure the number is not obscured by the red
- Insert a third slide, which is to be an organization chart. Use the title Meet The Team. Enter: Maggie Peet, Manager at the top of the chart, and show the following three as reporting to Maggie Peet: Brian Webb, Bookings; Janine Newton, Publicity; Gregg Brown, Accounts
- Embolden the text in the title of the third slide, and change the font to Arial.
- Apply a light coloured background to all the slides in the presentation
- On the third slide, insert an image suitable for the topic of food from an image library. Reduce the size of the image and place it where it will not interfere with
- Save the presentation as foodfair.
- Print the presentation with three slides per page, and close the presentation.
- 3. Do the followings:
  - Load your Presentation Application and start a new presentation
  - The first slide is a Title Only Slide. Select the appropriate layout and enter the title: Cook Family Cruises.
  - Add a small blue rectangle at the top left of this slide.
  - Change the font color for the whole title to red, and apply a text shadow effect just
  - Insert a second slide to the presentation, selecting a layout appropriate for a series of bullet points, and using the title: Our Itinerary. Enter the following text:
    - Canary Islands
    - Mediterranean b.
    - Greek Islands
  - Change the line spacing for these bullet points to 2 lines. Increase the font size of the word Itinerary in the title. Add a footer with your name and the text: Cruise Information so they both appear on every slide, and number all the slides.
  - Insert a third slide, which is to be a graph. Use the title Our Market Share. Use the following data to produce a pie chart: Cook 54%; Jackson 28%; Wilson 12%; Bennett 5%
    - Embolden the text in the title of the third slide, and change the font to Arial.
  - Apply a different background to each slide in the presentation.
  - On the third slide, insert an image suitable for the topic of holidays from an image library. Reduce the size of the image and place it where it will not interfere with
  - Add a 4-slide containing nothing but the text: Travel with us for less!!
  - Save the presentation as a holiday.
  - Print the presentation with 4 slides per page, and close the presentation.
- 4. Creating an animation looks like the leaf is falling in a tree.



5. Creating an animation looks like demolishing a world trade center in America.

#### MS-Access

- Create a database named "college" and perform the following tasks:
  - A. Create a table named "student" having following fields: Class, Roll no and Name with these Information i.e., Field Name, Data type and Description
  - B. Fill at least 5 records.
  - C. Prepare a query to display all records and Name should be in ascending order.
- 2. Create the employee table in MS-Access with the referential integrity-foreign key.

Note: This is a tentative list; the teachers' concern can add more experiment as per

Keyw Information Technology (IT), Information and Communication Technology (ICT), G-Suite, MS Word, MS ords Excel, MS Power Point, MS-Access.

Name and Signature of Convener & Members of CBoS:

KUJUR

#### Learning Resources PART-C:

Text Books, Reference Books and Others

## Text Books Recommended:

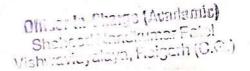
- Computer Fundamentals, P.K. Sinha, BPB Publication, Sixth Edition.
- Fundamentals of Information Technology, Chetan Shrivastava, Kalyan Publishers.
- Fundamentals of Computers, V. Rajaraman, PHI Sixth Edition.
- Computer Fundamentals and Office Automation, Dr. Santosh Kumar Miri, Iterative International
- Computer Fundamentals Architecture and Organization, B. Ram, New Age International Publisher IIP. Publishers, Fifth Edition.
- Fundamentals of Information Technology, Alexis Leon and Mathews Leon, Vikash Publication.

# Reference Books Recommended:

- Introduction to Information Technology, V. Rajaraman, PHI publication.
- Fundamental of IT, Leon and Leon, Leon Tec world.
- Introduction to Information Technology, Aksoy and Denardis, Cengage learning.
- Computers Today, Suresh K. Basandra, Galgotia Publications.
- Information Technology The breaking wave, Dennis P.Curtin, Kim Foley, Kunai Sen and Cathleen Morin, TMH.
- OFFICE 2013 in Simple Steps, Kogent Solution Inc., DremTech Press.
- Access 2010 in Simple Steps by Kogent Learning Solutions Inc.

#### Online Resources:

Introduction to Computer Fundamental from W3school: https://www.w3schools.blog/computer-fundamentals-tutorial



- Introduction to MS-Word from W3school: https://www.w3schools.blog/ms-word-tutorial
- Introduction to MS-Excel from W3school:

https://www.w3schools.com/excel/excel\_introduction.php

- Introduction to MS-PowerPoint from W3school: https://www.w3schools.blog/powerpoint-tutorial
- Introduction to MS-Access from W3school:

https://www.w3schools.com/sql/sql\_ref\_msaccess.asp

Fundamentals of Computers & Information Technology (in Hindi): https://www.mcu.ac.in/wp-content/uploads/2020/04/1PGDCA1-Unit-1-Fundamentals-of-Computers-Information-Technology.pdf.

Fundamentals of Computers & Information Technology (in Hindi): https://hte.rajasthan.gov.in/dept/dte/board\_of\_technical\_education,\_rajasthan/government\_polyte chnic college hanumangarh/uploads/doc/fundamental- final-rkd.pdf.

Information and Computers

Technology: https://cbseacademic.nic.in/web\_material/doc/2014/11\_ICT-IX.pdf.pdf.

https://www.scribd.com/document/534988849/9-Microsoft-office-in-hindi-www-GkNotesPDF-

MS-OFFICE:

https://www.rgycsm.org/uploads/books/MICROSOFT-OFFICE-BOOK.pdf.

MS-OFFICE:

Hindi Notes: https://www.copaguide.com/2020/04/ms-office-topics.html.

Microsoft Office Full Crash Course: https://www.youtube.com/watch?v=SH4oyV5AJ6A

D	ART	-D:	Assessment	and	Evaluation
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Suggested Continuous Evaluation Methods: 50 Marks Maximum Marks: 15 Marks Continuous Internal Assessment (CIA): 35 Marks End Semester Exam (ESE): Better marks out of the two Test / 10 & 10 Internal Test / Quiz-(2): Quiz + obtained marks in Assignment Continuous Internal Assignment/Seminar +Attendance - 05 shall be considered against 15 Marks Assessment (CIA): Total Marks -(By Course Teacher) Managed by Laboratory / Field Skill Performance: Course teacher End Semester Exam On spot Assessment as per lab. - 20 Marks A. Performed the Task based on lab. work (ESE): B. Spotting based on tools & technology (written) - 10 Marks status - 05 Marks Viva-voce (based on principle/technology)

Name wind Signature of Convener & Members of CBoS:

udies Nandkumar

ilaya, Raigarh (d

# FOUR YEAR UNDERGRADUATE PROGRAM (2024 - 28) DEPARTMENT OF INFORMATION TECHNOLOGY

	L		E CURRICULUN		
PA	RT- A: Introdu	ction			
	gram: Bachelor in		Semester - II	Session: <b>2024-</b> 20	025
1	Course Code	ITGE-02T			
2	Course Title	Programming in C+	+		
	Course Type	DGE (Discipline Ge	neric Elective)		
4	Prerequisite	As per program			
5	Course Learning. Outcomes (CLO)	<ul> <li>Understand the</li> <li>Write programs</li> <li>Define function</li> <li>Write programs</li> <li>Develop small</li> </ul>	se, the students will be able fundamentals of object or a related to concept of objects, class and to create own a for file handling, programs to solve real ways and to great to the solution of the solution.	ect oriented program Libraries.	
6	Credit Value	3 Credits   Cr	$\frac{redit}{100} = 15 Hours - Letter $	1in Passing Marks: 4	10
7	Total Marks	1 - 5 4h - Cours	50		
PAI	RT -B: Conte	aching_Learning Per	iods-(01 Hr. per period	d) - 45-P <del>erio</del> ds (45 Ho	urs)
Un		Tapia	s (Course contents)	#	No. of Period
I	file, Executable fi Testing, Debuggir Structure of C p Operators, Data T Precedence and A and User defined	le, Header file, Languaging, Linker and Loader, Aurogram, C Tokens: Types, Control structure associativity, Array and I functions, function pr	ots: Definition of Progra ge Translator- Assembler Algorithms, Flow Charts, Identifiers, Keywords, Conditional and loopin its types, Pointer, Funct ototype, Call by value	History of C language. Constants, Variables, g statements, Operator ions: Standard Library and Call by reference,	12
I	Introduction to programming, Fea objects, Access Sp functions. Constr	Object Oriented I ntures of C++, Structure pecifiers: Private, Public ructor: Default construct	e, Protected, inline function tor, Copy constructor, Par	t of object oriented pes, structure, class and ons, static data and static nameterized constructor,	11
I	Inheritance: Sin Polymorphism: D	gle, Multilevel, Mult befinition, Compile time structor overloading, R	polymorphism: Function cuntime polymorphism:	derived class, Types of I Hybrid Inheritance. In overloading, Operator Virtual Function, pure	11
Г	Input-Output an I/O. Object I/O, I Exception Handl	virtual function. Inline function, friend function, friend class.  Input-Output and File Handling: I/O classes, File and Stream classes, Char I/O, String I/O, Object I/O, File Pointer, Opening and Closing file.  Exception Handling and Standard Template Library: Definition, Exception basics, try. catch and throws keywords, Template.			
1000000	Token, Identifier, Keyword, Array, Function, Class, Object, Polymorphism, Inheritance, Construction of Template.				
Dr.	Harrian Hur	Members of CBOS:	Am Quel	W John	L A
	1. Store	The progression	St. PM	in ties	ALUEC
		nt!	Andrew Committee	134	of run

## PART-C: Learning Resources

Text Books, Reference Books and Others

## Text Books Recommended:

- Peter Juliff, Program Design, PHI Publications.
- Yashwant Kanetkar, Let us C: BPB Publications.
- E. Balaguruswamy, Programming in ANSI C, Tata McGraw Hill

## Reference Books Recommended:

- Y. Kanetkar, Let us C++, B.P.B Publication.
- E. Balaguruswamy, Programming in C++, Tata McGraw Hill.
- R. Kumar, Object Oriented Programming with C++, Prakhar Publication(Hindi)
- Dhupiya, Lakhyani, C++ Programming Alka Publications, Ajmer (Paperback, Dhupiya, Lakhyani)(Hindi)

#### Online Resources:

- Introduction to C and C++ from SWAYAM/NPTEL https://onlinecourses.nptel.ac.in/noc22\_es103/preview https://www.youtube.com/watch?v=KG4hjVDw-p8&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=2
- Constant and Inline Function through NPTEL:
  https://www.youtube.com/watch?v=pX6LufLso2M&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=10
- Pointer and Reference NPTEL https://www.youtube.com/watch?v=GtsBZ5e1-cE&list=PLmp4ylk-B4KrM9uOEdvPlVFUkU3jNc6D2&index=12
- Function Overloading NPTEL https://www.youtube.com/watch?v=uJGmGAShHeU&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=13
- Operator Overloading NPTEL https://www.youtubc.com/watch?v=0jpOwc4d-FE&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=17
- Dynamic Memory Management NPTEL https://www.youtube.com/watch?v=lkFK2X6q1c0&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=18
- Class and Object NPTEL
   https://www.youtubc.com/watch?v=wtuks\_t3vP4&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=24
- Access Specifiers NPTEL
   https://www.youtube.com/watch?v=6ki\_W7cXdM0&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=22
- Constructor and Destructor NPTEL
   https://www.youtube.com/watch?v=wtuks\_f3vP4&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=24
- C++ different topics from W3School https://www.w3schools.com/CPP/default.asp
- C++ different topics from Javatpoint https://www.javatpoint.com/cpp-tutorial

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Office: In-Charge (Academic)
Shelined Lanckumer Fetal
Vishvavicy aleya, Reigerh (C.G.)

PART -D: Assessment and Evaluation Suggested Continuous Evaluation Methods: Maximum Marks: 100 Marks Continuous Internal Assessment (CIA): 30 Marks End Semester Exam (ESE): 70 Marks Continuous Internal Better marks out of the two Test / Quiz + Internal Test / Quiz-(2): 20 +20 Assessment (CIA): obtained marks in Assignment shall be Assignment / Seminar -10 Total Marks considered against 30 Marks 30 (By Course Teacher) **End Semester Exam** Two section - A & B Section A: Q1. Objective - 10 x1= 10 Mark; Q2. Short answer type- 5x4 = 20 Marks (ESE): Section B: Descriptive answer type qts..1 out of 2 from each unit-4x10=40 Marks Name and Signature of Convener & Members of CBoS:

> Offiser-in-Charge (Avademic) Shahood Randkumar Falel Vishwavidyalaya, Raigarh (O.O.)

Patel 2. Fagarh (C.C.

# FOUR YEAR UNDERGRADUATE PROGRAM (2024 – 28) DEPARTMENT OF INFORMATION TECHNOLOGY COURSE CURRICULUM

PAR	T- 6	: Introdu	THE STREET	SE CURRICULUI	Y 1	
		Bachelor in Sc		Semester - II	Session: 2024-	2025
		/ Diploma / Degr		Semester - II	Session, 2024	
1	Cou	rse Code	ITGE-02P			
2	Cou	rse Title	Lab 2: Progra	nmming in C++		
3	Cou	rse Type	Practical			
4	Pre	requisite	As per program			
5		urse Learning teomes (CLO)	<ul> <li>Understa which are</li> <li>Code, test using the</li> <li>Write ret</li> <li>Understa allocation passing</li> <li>Develop oriented</li> </ul>	his course, the students will not the fundamental program e essential to create good C+st, and implement a well-struck+ programming language isable modules (collections on design/implementation and binding, control flow an in-depth understanding programming paradigms.	ming concepts and meth + programs. actured, robust computer s. of functions). issues involved with w, types, subroutines, of functional, logic, an	variable paramete
6	Cr	edit Value		redit =30 Hours Laborate	pry or Field Learning/	20
7		tal Marks	Max. Marks		n Passing Marks:	
PAR	T -B	: Content	of the Cour	se	20 Posieda (20 Hour	e)
		Total No. of	f learning-Traini	ng/performance Periods	: 30 Periods (50 From	No. o
Mod	110		To	pics (Course contents)	)	Perio
List Prac Exper s	tical iment	<ol> <li>Write a progrusing do – write a progrusing do – write a progratatements.</li> <li>Write a progratatements.</li> <li>Write a program Write a program of the progr</li></ol>	ram in C++ to find gram in C++ to find hile loop. ram in C++ for Maram in C++ to storam ram in C++ to storam in C++ to calcan ram in C++ to calcance method. ram in C++ to find ects. ram in C++ to maram in C++ to maram in C++ to maram	dition of two numbers using the biggest number between the factorial value of a parious arithmetic operation of two 3X3 mand are five books of information and the sum and average of a ultiply two numbers using the structure like this using the structure like structure like	as using switch case satrices. on using structure. on using union, ag call by value and five numbers using g private and public	30
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- 14. Write a program in C++ for operator overloading.
  15. Write a program in C++ for friend class and friend function.
  16. Write a program in C++ for virtual function and virtual class.
  17. Write a program in C++ for Exception Handling.
  18. Write a program in C++ to open and close a file using file Handling.
- 19. Given two ordered arrays of integers, write a program to merge the two-arrays to get an ordered array.
- 20. WAP to display Fibonacci series (i) using recursion, (ii) using iteration
- 21. WAP to calculate Factorial of a number (i) using recursion, (ii) using iteration
- 22. WAP to calculate GCD of two numbers (i) with recursion (ii) without recursion.
- 23. Create a Matrix class using templates. Write a menu-driven program to perform following Matrix Operations (2-D array implementation): a) Sum b) Difference c) Product d) Transpose 22. Create the Person class. Create some objects of this class (by taking information from the user). Inherit the class Person to create two classes Teacher and Student class. Maintain the respective information in the classes and create, display and delete objects of these two classes (Use Runtime Polymorphism).

24. Create a class Triangle. Include overloaded functions for calculating area.

Overload assignment operator and equality operator.

- 25. Create a class Box containing length, breadth and height. Include following methods in it: a) Calculate surface Area b) Calculate Volume c) Increment,
  Overload ++ operator (both prefix & postfix) d) Decrement, Overload -- operator (both prefix & postfix) e) Overload operator == (to check equality of two boxes), as a friend function f) Overload Assignment operator g) Check if it is a Cube or cuboid
- Create a structure Student containing fields for Roll No., Name, Class, Year and Total Marks. Create 10 students and store them in a file.
- 27. Write a program to retrieve the student information from the file created in the previous question and print it in the following format: Roll No. Name Marks
- 28. Copy the contents of one text file to another file, after removing all whitespaces.
- 29. Write a program for exception handling.
- 30. Write a program to insert data into file and to display it.

Note: Concerned teacher can add additional experiment as per requirement.

Signature of Convener & Members of CBoS:

OF-H-S: Hota Kun Schu Schu Structure, union, matrix, constructor, destructor, inheritance.

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PART-C: Learning Resources

Text Books, Reference Books and Others

## Text Books Recommended:

- Peter Juliff, Program Design, PHI Publications.
- · Yashwant Kanetkar, Let us C: BPB Publications.
- E. Balaguruswamy, Programming in ANSI C, Tata McGraw Hill

Reference Books Recommended:

Y. Kanetkar, Let us C++, B.P.B Publication .

Office: In-Charge (Adademic) Shahood Rendhumar Fedel Vishwavidyalaya, Haigarh (C.G.) Blar Patel

- E. Balaguruswamy, Programming in C++, Tata McGraw Hill.
- R. Kumar, Object Oriented Programming with C++, Prakhar Publication(Hindi)
- Dhupiya, Lakhyani, C++ Programming Alka Publications, Ajmer (Paperback, Dhupiya, Lakhyani)(Hindi)

#### Online Resources:

- Introduction to C and C++ from SWAYAM/NPTEL https://onlinecourses.nptel.ac.in/noc22 cs103/preview https://www.youtube.com/watch?v-KG4hjVDw-p8&list-PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=2
- Constant and Inline Function through NPTEL: https://www.youtube.com/watch?v=pX6LufLso2M&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=10
- Pointer and Reference NPTEL https://www.youtube.com/watch?v=GtsBZ5e1-cE&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=12
- Function Overloading NPTEL https://www.youtube.com/watch?v=uJGmGAShHeU&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=13
- Operator Overloading NPTEL https://www.youtube.com/watch?v=0jpOwe4d-FE&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=17
- Dynamic Memory Management NPTEL https://www.youtube.com/watch?v=lkFK2X6qIc()&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=18
- Class and Object NPTEL https://www.youtube.com/watch?v=wtuks\_f3vP4&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=24
- Access Specifiers NPTEL https://www.youtube.com/watch?v=6ki\_W7cXdM()&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=22
- Constructor and Destructor NPTEL https://www.youtube.com/watch?v=wtuks\_f3vP4&list=PLmp4ylk-B4KrM9uOEdvPIVFUkU3jNc6D2&index=24
- C++ different topics from W3School https://www.w3schools.com/CPP/default.asp
- C++ different topics from Javatpoint https://www.javatpoint.com/cpp-tutorial

PART -D: Assess	sment and Evaluation		
Suggested Continuous I Maximum Marks: Continuous Internal As End Semester Exam (Es	50 Marks sessment (CIA): 15 Marks		
Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test / Quiz-(2): 10 & Assignment/Seminar + Attendance - Total Marks -	+ obtained marks in As considered agains	signment shall be
End Semester Exam (ESE):	Laboratory / Field Skill Perform A. Performed the Task based on B. Spotting based on tools & ted C. Vivatvoce (based on principle	chnology (written) – 10 Marks le/technology) – 05 Marks	Managed by Course teacher as per lab. status
Vanne and signature of Co Dr H. S. Hota Lhon ( Chadr man	onvener & Members of CBoS:	gral or M	4

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## FOUR YEAR UNDERGRADUATE PROGRAM (2024 - 28) DEPARTMENT OF INFORMATION TECHNOLOGY COURSE CURRICULUM

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PA	RT-A: Introdu	ction		
	ogram: Bachelor in rtificate / Diploma / D	, , ,	Semester - I/III/V	Session: 2024-2025
1	Course Code	ITVAC-01		
2	Course Title	Artificial Intel	lligence	
3	Course Type	Value Additio	n Course (VAC)	
1	Prerequisite	As per program	n	11
5	Course Learning Outcomes(CLO)	<ul><li>Underst</li><li>Underst</li><li>Aware a</li></ul>	is course, students will be and basics of AI. and problem solving techrabout AI tools. application of AI in vario and the current scenario of	niques of AI. us domains. f AI in India.
6	Credit Value	2 Credits		earning & Observation   Min Passing Marks: 20
7	Total Marks	Max. Marks:	50	Ham a morning

## PART - B: Content of the Course

	Total No. of Teaching-Learning Periods (01 Hr. per period) - 30 Periods (30 Ho	No .of Period
Unit	Tonics II ourse contents	
1	Introduction: Overview of Artificial Intelligence (AI), Foundations of AI, Areas and Applications of AI in various domains, AI in India, Impact and examples of AI, Future of AI.	
11	Advanced AI: Basic Concept of Machine Learning, Deep Learning, Computer vision, Network Language Processing (NLP), Speech recognition, Generative AI Applications.	
III	AI Tools: Conversational AI: ALEXA, CORTANA, SIRI etc., AI tools for content	
IV	Application of AI: Agriculture, Healthcare, Environment, Teaching-Learning, E-Commerce, Industry, Research etc.  Artificial Intelligence (AI), Machine Learning (ML), Deep Learning, Computer Vision, Nature Processing (NLP), Conversational AI, Generative AI.	6

Signature of Convener & Members of Chos:

# PART-C: Learning Resources

Text Books, Reference Books and Others

Text Books Recommended:

- Introduction to Artificial Intelligence and Expert Systems, Dan W. Patterson, PHI Publication.
- Artificial Intelligence, Elaine Rich and Kevin Knight TMH publication.

Viahwavidyalaya, Flaigarh (O.G.)

- Artificial Intelligence and machine learning, Vinod Chandra S.S., Anand Harcendrn S., PHI learning private Ltd.
- Foundations of Artificial Intelligence and Expert Systems, Macmillan Series in Computer Science, V.S. Jankiraman, K. Sarukesi and P. Gopala Krishnan.

### Online Resources:

Ministry of Electronics and Information Technology Portal for INDIAai:

https://indiaai.gov.in/

Introduction to Artificial Intelligence from SWAYAM:

https://www.youtube.com/watch?v=pKeVMlkFpRc&list=PLwdnzIV3ogoXaceHrrFVZCJKbm\_laSHcH&inde x=2

An introduction to Artificial Intelligence from SWAYAM:

https://onlinecourses.nptel.ac.in/noc24\_cs08/preview

Introduction to Artificial Intelligence from Coursera: https://www.courseru.org/learn/introduction-to-ai

Introduction to Artificial Intelligence: https://www.javatpoint.com/artificial-intelligence-ai

How to Learn Artificial Intelligence from Coursera: https://www.coursera.org/articles/how-to-learn-artificial-intelligence

Suggested Continuous Evaluation Methods:  MaximumMarks:  Continuous Internal Assessment(CIA): 15 Marks  End Semester Exam(ESE): 35 Marks  Continuous  Internal Test / Quiz-(2): 10 + 10  Continuous  Internal Assessment( CIA):  (By Course Teacher)  End Semester  End Semester  Exam (ESE):  Laboratory/Field Skill Performance: On spot Assessment  A. Performed the task based on learned skill - 20 Marks  A. Performed the task based on learned skill - 20 Marks  A. Performed the task based on learned skill - 20 Marks  C. Viva-voce (based on principle/technology)- 05 Marks  C. Viva-voce (based on principle/technology)- 05 Marks  Chairman  Chairman  And Chairman  And Chairman  And Chairman  Assessment  And Chairman  And Chairman  And Chairman  And Chairman  Assessment  And Chairman  And Chairman  And Chairman  And Chairman  Assessment  And Chairman  And Chairman  And Chairman  And Chairman  Assessment  And Chairman  And Chai	PART-D: Assess	ment and Evaluation		
Continuous Internal Assessment(CIA): 15 Marks  End Semester Exam(ESE): 35 Marks  End Semester Exam(ESE): 35 Marks  Continuous  Internal Test / Quiz-(2): 10 + 10  Assignment/Seminar- 05  Total Marks - 15  Considered against 15 Marks  CIA):  (By Course Teacher)  End Semester  Exam (ESE): Laboratory/Field Skill Performance: On spot Assessment A. Performed the task based on learned skill - 20 Marks A. Performed the task based on learned skill - 20 Marks B. Spotting based on tools (Written) - 10 Marks C. Viva-voce (based on principle/technology)- 05 Marks  Coordinator as per skilling  Considered against 15 Marks  Coordinator as per skilling  Coordinator as per skilling	Suggested Continuous l	Evaluation Methods.		
End Semester Exam(ESE):  Continuous Internal Assessment( ClA): (By Course Teacher) End Semester Exam (ESE):  Internal Test / Quiz-(2): 10 + 10 Assignment/Seminar- Total Marks - 05 Total Marks - 15  Considered against 15 Marks  Managed by Coordinator as per Skilling  C. Viva-voce (based on principle/technology) - 05 Marks  C. Viva-voce (based on principle/technology) - 05 Marks  Coordinator as per Skilling  Coordinator as per Skilling	Continuous Internal As	SUSSINCIAC CONT.		
CIA): (By Course Teacher)  End Semester Exam (ESE):  Laboratory/Field Skill Performance: On spot Assessment A. Performed the task based on learned skill - 20 Marks B. Spotting based on tools (Written) - 10 Marks B. Spotting based on principle/technology)- 05 Marks C. Viva-voce (based on principle/technology)- 05 Marks	End Semester Exam(ES Continuous	Internal Test / Quiz-(2): 10 + 10 Assignment/Seminar- 05	obtained marks in	Assignment shan be
Vame and Signature of Convener & Members of CBoS:  OF ITS Hope V. Follow V. The State of CBoS:	CIA): (By Course Teacher) End Semester	Laboratory/Field Skill Performance: A. Performed the task based on lear	- 10 Marks	Coordinator as per
Sires Hekby) Shurdy ANDECTA KE	DETES FINE V	onvener & Members of CBoS:	Qual In	ANJECTA KU

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# FOUR YEAR UNDERGRADUATE PROGRAM (2024 – 28) DEPARTMENT OF INFORMATION TECHNOLOGY COURSE CURRICULUM

D) /	\ D7	A: Introd		URSE CURRICULU	IM	
		n: Bachelor in te/Diploma/D		Semester - II/IV/V/VI	Session: 2024-	2025
i						
2	Cour	se Title	MS-Office			
3	Cour	se Type	SEC (Skill Enhar	cement Course)		
4	Prer	equisite	As per program	and the second s	- to the total of	
5		rse Learning comes (CLO)	Study and us     Organize file     Acquire kno     Develop info	uladge of MS-Excel MS-Power	ices. cations. evaluating user require	
6	Cres	dit Value	2 Credits	Credit =15 Hours Theoretical = 30 Hours Laboratory		<b>Training</b>
			(1C+1C) Max. Marks:	50 Min	Passing Marks: 20	)
7	RT -	al Marks	it of the Coul	and the second s		
-	odule	T	То	aching-learning periods: tory or Field learning/Traini (30 Hours) pics (Course contents)	1	No. of Period
Setting fonts, Paragraph Mail Merge, Spelling Mail Merge, Spelling 2. MS-Excel: Introducin Opening, and Printing editing, Table, Charts, 3. PowerPoint: Introducing new slides saving, Open Convert to smart act. In			s. Paragraph setting s. Spelling and Gram Introducing Excel, and Printing workboo sile, Charts, Page sett t: Introducing Powe aving, Opening and	ing documents, Opening and its ing documents, Opening and its instance, Special Replace, Copy past mar check.  Use of Excel sheet, creating k. Font, Alignment, Number, up options.  Proint, Use of PowerPoint proprinting, Layout, Setting text doptions. Table, Picture, Clipar	new sheet, Saving, Styles and cells and esentation, Creating lirection, Align text, t, Smart art, Shapes	15
Tr	and chart, Movie and sound, Hyperlink and action, Text box, Word art, Object.  ab/Field raining Content  1. Create a word document and do followings: page setup, paragraph setup, tab setting etc.  2. Create a excel sheet and do followings: cell formatting, page setup, creating chart and use some predefine function.  3. Create a presentation and do followings: slide animation, text animation, slide show setting etc.					
Key	words	MS Word, MS Ex	cel, MS Power Point.	The state of the s	1) Jahr 14 - 14 - 14 - 14 - 14 - 14 - 14 - 14	
Dr		tora Kren (	Sured That	(Auademie)  (Auademie)  (Auademie)  (Auademie)  (Auademie)  (Auademie)  (Auademie)  (Auademie)  (Auademie)	Incertain No Bloggarh	ANJEG ANJEG

#### PART-C: Learning Resources

### Text Books, Reference Books and Others

#### Text Books Recommended:

- Computer Fundamentals, P.K. Sinha, BPB Publication, Sixth Edition.
- Fundamentals of Information Technology, Chetan Shrivastava, Kalyan Publishers.
- Fundamentals of Computers, V. Rajaraman, PHI Sixth Edition.
- Computer Fundamentals and Office Automation, Dr. Santosh Kumar Miri, Iterative International Publisher IIP.
- Computer Fundamentals Architecture and Organization, B. Ram, New Age International Publishers, Fifth Edition.
- Fundamentals of Information Technology, Alexis Leon and Mathews Leon, Vikash Publication.

## Reference Books Recommended:

- Introduction to Information Technology, V. Rajaraman, PHI publication.
- Fundamental of IT, Leon and Leon, Leon Tec world.
- Introduction to Information Technology, Aksoy and Denardis, Cengage learning.
- Computers Today, Suresh K. Basandra, Galgotia Publications.
- Information Technology The breaking wave, Dennis P.Curtin, Kim Foley, Kunai Sen and Cathleen Morin, TMH.
- OFFICE 2013 in Simple Steps, Kogent Salution Inc., DremTech Press.
- Access 2010 in Simple Steps by Kogent Learning Solutions Inc.

#### Online Resources:

- Introduction to Computer Fundamental from W3school: https://www.w3schools.blog/computer-fundamentals-tutorial
- Introduction to MS-Word from W3school: https://www.w3schools.blog/ms-word-tutorial
- Introduction to MS-Excel from W3school:
- https://www.w3schools.com/excel/excel\_introduction.php
- Introduction to MS-PowerPoint from W3school: https://www.w3schools.blog/powerpoint-tutorial
- Introduction to MS-Access from W3school: https://www.w3schools.com/sql/sql\_ref\_msaccess.asp
- Fundamentals of Computers & Information Technology (in Hindi): https://www.mcu.ac.in/wp-content/uploads/2020/04/1PGDCA1-Unit-1-Fundamentals-of-Computers-Information-Technology.pdf.
- Fundamentals of Computers & Information Technology (in Hindi): https://hte.rajasthan.gov.in/dept/dte/board of technical education, rajasthan/government polytechnic college hanumangarh/uploads/doc/fundamental- final-rkd.pdf.
- Information and Computers Technology: https://cbseacademic.nic.in/web\_material/doc/2014/11\_ICT-IX.pdf.pdf.
- Microsoft Office (in Hindi): https://www.scribd.com/document/534988849/9-Microsoft-office-in-hindi-www-GkNotesPDF-com.
- MS-OFFICE: https://www.rgycsm.org/uploads/books/MICROSOFT-OFFICE-BOOK.pdf.
- MS-OFFICE: Hindi Notes: https://www.copaguide.com/2020/04/ms-office-topics.html.
- Microsoft Office Full Crash Course: https://www.youtube.com/watch?v=SH4oyV5AJ6A

PART -D: Assessment and Evaluation Officer to Characterinar Folds Shelf for conclusionar Folds Mahwali, Laya, Fiolgath (O.G.) Chairman

Suggested Continuous Evaluation Methods: 50 Marks Maximum Marks: 15 Marks Continuous Internal Assessment (CIA): 35 Marks End Semester Exam (ESE): Better marks out of the two Test / Quiz 10 & 10 Internal Test / Quiz-(2): Continuous Internal + obtained marks in Assignment shall Assignment/Seminar + Attendance - 05 Assessment (CIA): be considered against 15 Marks (By Course Teacher) Total Marks -Managed by Laboratory / Field Skill Performance: **End Semester** Course On spot Assessment teacher as per - 20 Marks Exam (ESE): A. Performed the Task based on lab. work lab. status B. Spotting based on tools & technology (written) - 10 Marks Viva-voce (based on principle/technology) - 05 Marks Name and Signature of Convener & Members of CBoS: Dr. Hos Borg Chermen

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# शहीद नंदकुमार पटेल विश्वविद्यालय, रायगढ़ (छ.ग.)

(छत्तीसगढ़ विश्वविद्यालय अधिनियम 1973 द्वारा स्थापित राजकीय विश्वविद्यालय)



राष्ट्रीय शिक्षा नीति – 2020 के तहत तृतीय एवं चतुर्थ सेमेस्टर नवीन पाठ्यक्रम (सत्र 2025–26)

इफारमेशन देवनालांजी

# FOUR YEAR UNDERGRADUATE PROGRAM (NEP-2020)

Program: Bachelor in Science (2024 -28) DISCIPLINE - INFORMATION TECHNOLOGY

### **SESSION - 2024-25**

	DSC -01 to 08	. 4	DSE -01 to 12
Code	Title	Code	Title
ITSC-01T	Fundamental of IT and MS-Office	ITSE -01	Data Structure
ITSC-01P	Lab 1: MS-Office	ITSE -02	Internet and E-Commerce
ITSC-02T	Programming in C++	ITSE -03	Information and Network Security
112C-05b	Lab 2: Programming in C++	ITSE -04	Introduction to Artificial Intelligence
ITSC-03T	Relational Database Management System	ITSE -05	Computer System Architecture
ITSC-03P	Lab 3: Relational Database Management System (Oracle / MySQL)	ITSE -06T	Mobile Application Development
ITSC-04T	Programming in . Net	ITSE -06P	Lab 8: Mobile Application Development
TTSC-04P	Lab 4: Programming in . Net	ITSE -07	Software Engineering
ITSC-05T	Programming in Java	ITSE_08	Theory of Computation
ITSC-05P	Lab 5: Programming in Java	ITSE -09	Soft Computing
ITSC-06T	Web Technology	ITSE -10	Computer Graphics
TTSC-06P	Lab 6: Web Technology	ITSE -11	Cloud Computing
1TSC-07T	Programming in Python	ITSE -12	Major Project
ITSC-07P	Lab 7: Programming in Python		
ITSC-08T	Fundamental of IoT and Applications		
ITSC-08P	Lab 9: Fundamental of loT and Applications		
	DGE -01 & 02		VAC
TGE -01T	Fundamental of IT and MS-Office	ITVAC-01	Artificial Intelligence
ITGE -01P	Lab 1: MS-Office		SEC
TGE -027	Programming in C++	ITSEC-01	MS OFFICE
TGE -02P	Lab 2: Programming in C++		Chairman

## Program Outcomes (PO):

• Gain a complete exposure to the theories and practices of Information Technology.

Get transformed into a skilled learner and active programmer, enabling the students to focus on their higher studies.

eed Nandl

dyalaya, Fagarh (C.G

Value IT professionals and programmers.

Explore how the concepts and applications of Information technology lead to innovative thinking with problem-solving attitude.

### Program Specific Outcomes (PSO):

Understand the basic IT knowledge and practical application in MS Office.

Understanding the concept of programming and develop program in C++.

Huderstanding the concept of data structure and implementation, with C / C-1

Understanding the concept of DBMS and implementation in MySQL / Oracle, Understanding the concept of Dot Net technology with practical implementation.

Understanding the concept of OOPs and Java programming and develop program in Java.

Understanding the concept of web technology and its implementation with HTML/CSS/DHTML/PHP.

Understand the basic concept of internet and E-commerce.

Understanding the basic concept of information and network security.

Understanding the basic concept of Artificial Intelligence,

Suren Thateun (Dr. A)

rin-Chargo (Avadamic) eed Nanckumar Petal Vishwavidyalaya, Flaigarh (C.G.)

# **Curriculum Structure**

# Scheme

Program: B.Sc.

Discipline: Information Technology

		Discipilite	Information Technology	Total	Tot Mar	
	Course Type	Course Code	Course Title	Credit	Max	Min
Semester	Course Type		Fundamental of IT and MS-Office	3	100	40
1st		ITSC-01T	Fundamental of 11 and 110	1	50	20
Semester	DSC (Major/Core)	ITSC-01P	Lab 1: MS-Office		100	40
	د با مساده	ITSC-02T	Programming in C+1	3	50	20
2 <sup>nd</sup> Semester	DSC (Major/Core)	ITSC-02P	Lab 2; Programming in C++		30	
	(wajoured. 5)		Relational Database Management	3	100	40
3rd	DSC (Major/Core)	ITSC-03T	System  Lab 3: Relational Database  Management System	*/ 1	50	20
3 <sup>rd</sup> Semester		ITSC-03P	(Oracle/MySQL)  Data Structure	4	100	40
	DSE	ITSE-01	Data or we	1		10
		T	Programming in .Net	3	100	40
L.	DSC (Major/Core) DSE	ITSC-04T	Lab 4: Programming in .Net	1	50	20
4 <sup>th</sup> Semester		ITSC-04P	Internet and E-Commerce	4	100	40
Semester		ITSE-02	Internet and D-comme			10 10
		ITSC-05T	Programming in JAVA	3.	100	40
5 <sup>(l)</sup>	DSC	ITSC-05P	Lab 5: Programming in JAVA	1	50	20
Semester	(Major/Core) - DSE	ITSE-03	Information and Network Security	4	100	40
اسوسرسانی کا استعیاب				1 2	100	40
		ITSC-06T	Web Technology	3	1	20
6 <sup>th</sup>	DSC (Major/Core)	ITSC-06P	Lab 6: Web Technology	1	Signie	0 0 0 0 0 0 0 0 0
Semester		ITSE-04	Introduction to Artificial Intelligence	1 4	1,00	dkum 1, Raig
	151.0.131 10.000				1.00	40
กอรนา	, Flat BSC	ITSC-07T	Programming in Python	3	50	20
iaviyilalaye	(Major/Core)	ITSC-07P	Lab 7: Programming in Python	4	100	40
Semester	DSE	ITSE-05	Computer System Architecture	(Shal		1

On History King That (In airman Ork & Dubey) (Buthi Kongr Sales)

		ITSE-06T	Mobile Application Development	3	100	
		ITSE-06P	Lab 8: Mobile Application  Development		50	
		ITSE-07	Software Engineering	4	100	
		ITSE-08	Theory of Computation	13,4	100	1
Many Section						
	retries trans	ITSC-08T	Fundamental of IoT and Applications	3	100	
oth	DSC (Major/Core)	ITSC-08P	Lab 9: Fundamental of IoT and Applications	Line	50	
8 <sup>th</sup>	Dec	ITSE-09	Soft Computing	4	100	
Semester	DSE	ITSE-10	Computer Graphics	4	100	
	A Land Control	ITSE-10	Cloud Computing	4	100	+
		ITSE-12	Major Project A No	4	100	١-
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m H.S. Ho Chevirma (R. Khuutke	My Chrk. 2 Dr. Rushid  (Sushid  Sheijundry  Sheijundry		Lower for Amy Surest Theran June June 16 Source Wards	CP	Cor AN	le he

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# FOUR YEAR UNDERGRADUATE PROGRAM (2024 – 28) DEPARTMENT OF INFORMATION TECHNOLOGY

P	ART-A: Introd	luction						
	ogram: Bachelor in ortificate / Diploma / Do		Semester - III	Session: 2024-2	2025			
1	Course Code	ITSC-03T	ITSC-03T					
2	Course Title	Relational Datal	base Management System					
3	Course Type		Specific Course)					
4	Prerequisite	As ner program						
5	Course Learning Outcomes (CLO)	<ul> <li>At the end of this course, the students will be able to: <ul> <li>Learn about Database Concepts, Architecture, various Users, Data Models and Data Management.</li> <li>Familiar with RDBMS Software like Oracle and MySql.</li> <li>Create various Tables and Databases.</li> <li>Explore various SQL commands.</li> <li>Create Database on the basis of E-R diagrams for Minor and Major Project.</li> </ul> </li> </ul>						
6.	Credit Value	3 Credits	Credit = 15 Hours - Leas	in Passing Marks: 4	10			
7	Total Marks	Max. Marks:	100	III I assing and				
PAI	RT-B: Conten	t of the Cour	(Se (01 III. non nonice)	- 45 Periods (45 Hou	ırs)			
	Total No. of Tea		Periods (01 Hr. per period)	451010	No. of			
Un	it	Top	pics (Course contents)		Period			
I	Management, Day Instance and sche Oriented Approac Roles, Database I	a Models: Network ma, View of Datab h, Data Independen anguages: DDL, DI to Dictionary	ent: Introduction, Data Prok Model, Relational Model pase system, File Oriented Ace, DBMS Architecture, DaML, DCL, TCL, Different k	Approach vs Database tabase Administration inds of DBMS users,	12			
11	Database Design Relationship, Car Primary key, Alte	and E-R Model: Introduction, Entity, Strong and weak entities, dinality, Attributes, Concept of keys: Super key, Candidate key, nate key, Foreign key, ER Diagram, Constraints in Database, Codd's ER features: Generalization, Specialization and Aggregation, verting an E-R model into relational Schema.			11			
III Relational Datable dependencies, M Decomposition, N normalization. Re Cartesian Product		ase Design and Op altivalued Depende ormalization: Norm ational Algebra: Se operation, Intersec	perations: Introduction, Dependencies, Join dependencies, and forms INF, 2NF, 3NF, Elect operation, Project operation operation operation.	BCNF, 4NF, 5NF, Detion, Union operation,	11			
IV	joins (Inner join, Outer join, Self join).  IV Transaction: Introduction, Desirable properties of transaction (ACID), Concurrency control techniques, Serializability.				11			
Keyıvu	Data Models, Da	a Dictionary, E-R	R Model, E-R Diagram, K Algebra, Concurrency, Seri	(eys, Functional Depe alizability	endency,			
Drift	Kure of Convener & M	embers of CBoS:	Amm - Oll	Se la	Suld			
ch	Euron 31	(akun)	Burden June 2	Surpris ,	ANJEEL			
	Survey	Officer in the	iarge (11) Leannist Iarge (11) Leannist Iargeromai Palal Iga Raigath (0.0.)	Studie	910			

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#### Learning Resources PART-C:

## Text Books, Reference Books and Others

## Text Books Recommended:

- Database system concept, H. Korth and A. Silberschatz, TMH Publications.
- Data Base Management System, Alexies & Mathews, Vikash publication.
- Data Base Management System, C. J. Date , Narosha Publication.
- Data Base Management System By James Matin.

## Reference Books Recommended:

- Principles of Database System By Ullman.
- Program Design, Peter Juliff, PHI Publications.
- The Complete Reference, Kevin Loney, Oracle Press.
- SQL, PL/SQL The Programming Language of Oracle, Ivan Bayross, PustakKosh Publication.
- Microsoft SQL Server Management and Administration, Ross, STM Publications.

## Online Resources:

- SWAYAM URL link for DBMS and RDBMS: https://youtu.bc/f6LGtJufWyA
- SWAYAM URL link for DBMS and RDBMS: https://youtu.be/loL9Ve2SRwQ
- SWAYAM URL link for DBMS and RDBMS: https://swayam.gov.in/courses/4434-data-basemanagement-system.
- Introduction of DBMS from SWAYAM: https://onlinecourses.swayam2.ac.in/cec19\_cs05/preview
- Introduction of RDBMS from SWAYAM: https://onlinecourses.nptel.ac.in/noc19\_cs46/preview
- Introduction to DMBS: https://www.w3schools.in/dbms/intro
- Data independence: https://www.w3schools.in/dbms/data-independence
- Generalization and Aggregation: https://www.w3schools.in/dbms/generalization-aggregation
- Introduction to DMBS: https://www.javatpoint.com/dbms-tutorial

Maximum Marks:  Continuous Internal Assessment (CIA): 30 Marks  End Semester Exam (ESE): 70 Marks  Continuous Internal Internal Test / Quiz-(2): 20 + 20  Assignment / Seminar - 10  Assignment / Seminar - 10  By Course Teacher)  End Semester  Exam (ESE): Two section - A & B  Section A: Q1. Objective - 10 xI= 10 Mark; Q2. Short answer type- 5x4 = 20 Marks  Section B: Descriptive answer type qts1 out of 2 from each unit-4x10=40 Marks  Section B: Descriptive answer type qts1 out of 2 from each unit-4x10=40 Marks	Maximum Marks:  Continuous Internal Assessment (CIA): 30 Marks  End Semester Exam (ESE): 70 Marks  Continuous Internal Test / Quiz-(2): 20 + 20	PART -D: Assessment and Evaluation Suggested Continuous Evaluation Methods: 100 Marks	
Continuous Internal Assignment / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Continuous Internal Continuous Internal Test / Quiz-(2): 20 + 20 Conti	Continuous Internal Assessment (ESE):  To Marks  End Semester Exam (ESE):  Continuous Internal Internal Test / Quiz-(2): 20 + 20  Assessment (CIA):  Assignment / Seminar - 10  Assignment / Seminar - 30  Total Marks - 30  End Semester  Exam (ESE):  Two section - A & B  Section A: Q1. Objective - 10 xI = 10 Mark; Q2. Short answer type- 5x4 = 20 Marks  Section B: Descriptive answer type qts1 out of 2 from each unit-4x10=40 Marks  The standard for the two Test / Quiz obtained marks in Assignment shall be considered against 30 Marks  Section A: Q1. Objective - 10 xI = 10 Mark; Q2. Short answer type- 5x4 = 20 Marks  Section B: Descriptive answer type qts1 out of 2 from each unit-4x10=40 Marks  The standard for the two Test / Quiz obtained marks in Assignment shall be considered against 30 Marks  Section A: Q1. Objective - 10 xI = 10 Mark; Q2. Short answer type- 5x4 = 20 Marks  Section B: Descriptive answer type qts1 out of 2 from each unit-4x10=40 Marks  The standard for the two Test / Quiz obtained marks in Assignment shall be considered against 30 Marks  Section A: Q1. Objective - 10 xI = 10 Mark; Q2. Short answer type- 5x4 = 20 Marks  Section B: Descriptive answer type qts1 out of 2 from each unit-4x10=40 Marks  The standard for the two Test / Quiz obtained marks in Assignment shall be considered against 30 Marks  Section A: Q1. Objective - 10 xI = 10 Mark; Q2. Short answer type- 5x4 = 20 Marks  Section B: Descriptive answer type qts1 out of 2 from each unit-4x10=40 Marks	Maximum Marks:	김 김 씨는 아무지 않는데 보다 그
Continuous Internal   Internal Test / Quiz-(2): 20 + 20   Quiz obtained marks in Assignment   Assignment / Seminar - 10   Quiz obtained marks in Assignment   Shall be considered against 30 Marks   Shall be considered against 30 Marks   Section A: Q1. Objective - 10 x1 = 10 Mark; Q2. Short answer type - 5x4 = 20 Marks   Section B: Descriptive answer type qts1 out of 2 from each unit-4x10=40 Marks   Shall be considered against 30 Marks   Shal	Continuous Internal Test / Quiz-(2): 20 +20  Assessment (CIA):  (By Course Teacher)  Total Marks - 30  Total Marks - 30  End Semester  Exam (ESE):  Two section - A & B  Section A: Q1. Objective - 10 x1= 10 Mark; Q2. Short answer type- 5x4 =20 Marks  Section B: Descriptive answer type qts1 out of 2 from each unit-4x10=40 Marks  The strioty for the two Test / Quiz obtained marks in Assignment shall be considered against 30 Marks  On the two Test / Quiz obtained marks in Assignment shall be considered against 30 Marks  Section A: Q1. Objective - 10 x1= 10 Mark; Q2. Short answer type- 5x4 =20 Marks  Section B: Descriptive answer type qts1 out of 2 from each unit-4x10=40 Marks  The strioty for the two Test / Quiz obtained marks in Assignment shall be considered against 30 Marks  Two section - A & B  Section A: Q1. Objective - 10 x1= 10 Mark; Q2. Short answer type- 5x4 =20 Marks  Section B: Descriptive answer type qts1 out of 2 from each unit-4x10=40 Marks  The strioty for the two Test / Quiz obtained marks in Assignment shall be considered against 30 Marks  Two section - A & B  Section A: Q1. Objective - 10 x1= 10 Mark; Q2. Short answer type- 5x4 = 20 Marks  Section B: Descriptive answer type qts1 out of 2 from each unit-4x10=40 Marks  The strioty for the two Test / Quiz obtained marks in Assignment shall be considered against 30 Marks  Two section - A & B  Section A: Q1. Objective - 10 x1= 10 Mark; Q2. Short answer type- 5x4 = 20 Marks  Section B: Descriptive answer type qts1 out of 2 from each unit-4x10=40 Marks	Continuous Internal Assessment	
Two section – A & B Section A: Q1. Objective – 10 xI= 10 Mark; Q2. Short answer type- 5x4 = 20 Marks Section B: Descriptive answer type qts1 out of 2 from each unit-4x10=40 Marks  Implication of Convener & Members of CBoS:  The state of the convener of Convener & Members of CBoS:  The state of the convener of Convener & Members of CBoS:  The state of the convener & Members of CBoS:  The state of the convener & Members of CBoS:  The state of the convener & Members of CBoS:  The state of the convener & Members of CBoS:	End Semester  Exam (ESE):  Two section – A & B  Section A: Q1. Objective – 10 xI= 10 Mark; Q2. Short answer type- 5x4 = 20 Marks  Section B: Descriptive answer type qts1 out of 2 from each unit-4x10=40 Marks  Tame voor stignature of Convener & Members of CBoS:  The stignature of Convener & Members of CBoS:  Cheur wan  The stignature of Convener & Members of CBoS:  The stignature of Convener & Members of CBoS:  The stignature of Convener & Members of CBoS:	Continuous Internal Internal Test / Quiz-(2): 20 +20 Assessment (CIA): Assignment / Seminar - 10 Assessment (CIA): 30	Ouiz obtained marks in Assignment
	perhat 09	Exam (ESE):  Two section — A & B  Section A: QI. Objective — 10 xI= 10 Mark  Section B: Descriptive answer type qts1 of  Section B: Descriptive answer type qts1	L GOLD Sull

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# FOUR YEAR UNDERGRADUATE PROGRAM (2024 – 28) DEPARTMENT OF INFORMATION TECHNOLOGY

PA	RT- A: Intro	duction	URSE CURRICULL		
Pro (Cer	gram: Bachelor i tificate / Diploma / L	n Science (IT)	Semester - III	Session: 2024	1 <b>-</b> 2025
1	Course Code	ITSC-03P			
2	Course Title	Lab 3: Relational	Database Management Sy	vstem (Oraclé/MyS	OL)
3	Course Type	Practical	The second secon	Stem (Ornele/1913)	QD)
4	Prerequisite	As per program	and the second management and the second	2	and the second second second
6 0	Course Learning Outcomes (CLO)  Develop va Software.  Practice va relationship Software De Familiar wit as Backend Develop ner which enha Managemen		RDBMS Software like Oracle or Software Development. Databases for their Minor areces their Data Storage, Dedit = 30 Hours Laboratory of 50 Min Pa	helps them to de helps them to general batabases which are and SQL Server which ad-Major Project Devota Accessibility and Field Learning/T	velop neverate never useful for the are used velopment and Data
PAIX		t of the Cour of learning-Training	se g/performance Periods: 30	Periods (30 Hours)	
Modu			ics (Course contents)		No. of Period
List of	eid(primary fields and an questions: a) Insert f b) Display c) Delete d) Update e) Add one 2. Design a sala key(employee Month, workin a) Insert fiv b) Display c) Use fore d) Update tl e) Add one 3. Create a new u	key) ename, edesign iswer the following live records in above all five records. the fourth record of the new field in the tabiry table Oracle/SQ table) having following days, deptid, grosve records in the aboall five records.	ne field ename as 'hari'.  L Server with one primary ving fields: s, incentive, deduction and reve created table.  I display records. field deptid as 'Sales'. e. erver.	key and foreign	30

अध्यक्ति महत्वि शहीद नंदकुमार पटेल ्विश्वविद्यालय, रायगढ् (छ.ग.)

- 7. Create a new database in Oracle/SQL Server having at least five tables for the Hotel Management System. 8. Create a new database in Oracle/SQL Server having at least four tables for Covid Vaccination Management System. 9. Create a new database in Oracle/SQL Server having at least five tables for the Library Management System. 10. Create a new table in Oracle/SQL Server and practice for Group by and Order by Clause. 11. Create a new table in Oracle/SQL Server and practice for max(), min(), avg()
  - and count() functions.

12. Create a new table in Oracle/SQL Server and practice for lower(), substr(),trim() and upper() functions.

13. Create a new table in Oracle/SQL Server and practice for unique and check constraints.

14. Create a new table in Oracle/SQL Server and practice for any two date formats.

15. Create a new table in Oracle/SQL Server and practice using clauses.

16. Create a new table in Oracle/SQL Server and practice for having clauses with sub queries.

17. Create a new table in Oracle/SQL Server and practice for aliases in any table.

- 18. Create a new table in Oracle/SQL Server and practice for inner and outer join.
- 19. Create a new table in Oracle/SQL Server and practice for Drop command.

20. Write a PL/SQL program for addition of two numbers.

21. Write a PL/SQL program to find the factorial value of any entered number.

22. Write a PL/SQL program for swapping of two numbers.

23. Write a PL/SQL program to print the first ten Natural Numbers.

- 24. Write a PL/SQL program to generate even series upto five digits starting from 2 and sum all the terms.
- 25. Write a PL/SQL program to practice for implicit and explicit cursors.

Note: Concerned teacher can add additional experiment as per requirement.

Keywords

TABLE, SQL, PL/SQL.

Signatur of Convener & Members o Dr. A.S. HOLO

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#### Learning Resources PART-C:

Text Books, Reference Books and Others

## Text Books Recommended:

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- Program Design, Peter Juliff, PHI Publications.
- The Complete Reference, Kevin Loney, Oracle Press.
- SQL, PL/SQL The Programming Language of Oracle, Ivan Bayross, PustakKosh Publication.
- Microsoft SQL Server Management and Administration, Ross, STM Publications.

## Online Resources:

- SWAYAM URL link for DBMS and RDBMS: https://youtu.be/l6LGtJutWyA
- SWAYAM URL link for DBMS and RDBMS:
   https://youtu.bc/IoL9Vc2SRwQ
- SWAYAM URL link for DBMS and RDBMS: https://swayam.gov.in/courses/4434-data-base-management-system

Suggested Continuous Evaluation Methods:  Maximum Marks:  Continuous Internal Assessment (CIA): 15 Marks  End Semester Exam (ESE): 35 Marks  Continuous Internal Internal Test / Quiz-(2): 10 & 10 Better marks out of the two Test / Quiz Assessment (CIA):  (By Course Teacher)  End Semester Laboratory / Field Skill Performance: On spot Assessment Assessment Assignment shall be considered against 15 Marks  End Semester Laboratory / Field Skill Performance: On spot Assessment Assessment Assignment shall be considered against 15 Marks  Exam (ESE):  A. Performed the Task based on lab. work - 20 Marks B. Spotting based on tools & technology (written) - 10 Marks C. Viva-voce (based) on principle/technology) - 05 Marks  Name and Signature of Convener & Members of CBoS:  Or 17:54-10-19  Chebrywan Original Assessment (CIA): 15 Marks Course teacher as per lab. status
Continuous Internal Assessment (CIA):  (By Course Teacher)  Assignment/Seminar +Attendance - 05 Total Marks - 15  End Semester  Exam (ESE):  A. Performed the Task based on lab. work B. Spotting based on tools & technology (written) - 10 Marks C. Viva-voce (based) on principle/technology)  Name and Signature of Convener & Members of CBoS:  Or. 14:341049  Chevryan  A. Better marks out of the two Test / Quiz + obtained marks in Assignment shall be considered against 15 Marks  Course teacher as per lab. status  Chevryan  Chevryan
Continuous Internal Assessment (CIA):  (By Course Teacher)  Assignment/Seminar +Attendance - 05 Total Marks - 15  End Semester  Exam (ESE):  A. Performed the Task based on lab. work B. Spotting based on tools & technology (written) - 10 Marks C. Viva-voce (based) on principle/technology)  Name and Signature of Convener & Members of CBoS:  Or. 14:341049  Chevryan  A. Better marks out of the two Test / Quiz + obtained marks in Assignment shall be considered against 15 Marks  Course teacher as per lab. status  Chevryan  Chevryan
Continuous Internal Assessment (CIA): (By Course Teacher)  End Semester  Exam (ESE):  A. Performed the Task based on lab. work B. Spotting based on tools & technology (written) – 10 Marks C. Viva-voce (based on principle/technology)  Vame and Signature of Convener & Members of CBoS:  On spot Assessment  Managed by Course teacher as per lab. status  Cheurman
Exam (ESE):  A. Performed the Task based on lab. work  B. Spotting based on tools & technology (written) – 10 Marks  C. Viva-voce (based on principle/technology) – 05 Marks  Vame and Signature of Convener & Members of CBoS:  Dr. 17.54-10-19  Chevrnian  Of the Chevrian  Of the Chevran  Of the Chevrian  Of the Chevrian  Of the Chevrian  Of the Chevran  Of the Chevren  Of the
Dr. 17.54-1019 Kun Galley Members of CBoS:
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शहीद नंदरूमार पटेल विश्वविद्यालय, राय्मढ (छ.ग.)

# FOUR YEAR UNDERGRADUATE PROGRAM (2024 – 28) DEPARTMENT OF INFORMATION TECHNOLOGY COURSE CURRICULUM

-	IRT		luction			
Program: Bachelor in So			and the second s	Semester - IV	Session: 2024-	2025
1	Cou	irse Code	ITSC-04T			
2	Cou	rse Title Programming in .Net				
3	Cou	ourse Type DSC (Discipline Specific Course)				
4	Pre	erequisite	As per program			
5 Course Learning. Outcomes (CLO)			After Completing this course, students will be able to:  Study and use of .NET framework and object-oriented programming.  Develop the console and GUI applications using .Net programming.  Evaluate the .NET framework namespace contents.  Understand the procedures, File I/O, Error handling and Message queues.  Understand and remember the components in VB.NET IDE, ADO.NET and also the window forms.			
6	Cr	edit Value	3 Credits	Credit = 15 Hours - Lear	rning & Observation	
7	To	tal Marks	Max. Marks:	100 M	in Passing Marks: 4	0
PA	RT	-B: Conte	ent of the Cou	rse L		
-		Total No. of Te	aching-Learning Po	riods (01 Hr. per period	) - 45 Periods (45 Fiot	No. of
U	nit		Topi	cs (Course contents)		Period
	I	Managed Execut MSIL, Namespa	ion process, CLR, Coce, Assemblies, Metac	of .net framework, Feature mmon language specificate data common type, System language, Interoperability.	, Visual development Garbage collection.	12
	II	Programming v IDE, Creating a Variable, Type	NET solution, MDI a conversions, Operator	pplication, Components and events, S. Methods and events, S.	d controls, Data types,	11
	III	methods, Method handling try cate GUI Programm Textbox, RichT Radio button, OpenfileDialog,	res: Control Structured data, Creating Sub Prohibit statement, finally staining: GUI Programment box, Label, Butto Toggle button, Pane Save File dialog, Principles	s: conditional statement, Locedures and Function, Intatement, throw, user define ning with window forms on, Listbox, Combobox, Controllbar, ont dialog, Front dialog, Coputbox.	d Exception. , Showing & hiding, Checkbox, Picturebox, Firmer, Dialog boxes, blor dialog, Designing	11
	IV	Database Progradataset compon connectivity thr	ents, creating databa ough ADO.Net), Accounts	se application using Win essing data using server ex er. Data bind controls, displ	colorer. Data Adapters	11
Ka Si	gnatu gnatu Dr. H.	NET Window for	m, Graphical User Inte Members of Chos:	Jace (GUI), MDI, ADO. Nel  Stores 1k	W AND	ANTO

#### PART-C: **Learning Resources**

#### Text Books Recommended:

- Visual Basic .Net Complete- by BPB Publications , New Delhi
- The Complete Reference VB.Net -by Jeffery R. Shapiro, Tata Mcgraw Hill.
- Bill Evjen, Jason Beres, et.al, Visual Basic .Net programming, Wiley Dreamtech India (p) Ltd.

## Reference Books Recommended:

- Professional VB.Net 2003 by Bill Evjen & others, Wiley Dreamtech India(P) Ltd. New Delhi
- Fergal Grimes, Microsoft .NET for programmers, Shroff Publishers & Distributors (P) Ltd.
- Thuan Thai & Hoang Q.Lam, NET Framework Essentials, Shroff Publishers & Distributors (P)
- MSDN online by Microsoft

## Online Resources:

- VB.Net Basic Tutorial: https://www.tutorialspoint.com/vb.net/vb.net\_loops.htm.
- VB.NET Tutorial:
  - https://www.javatpoint.com/vb-net.
- VB.NET Tutorial for Beginners: Learn VB.Net Programming: https://www.guru99.com/vb-net-tutorial.html?gpp&gpp\_sid.
- Home and Learn: VB Net Programming Course Contents: https://www.homeandlearn.co.uk/NET/vbNet.html.
- Programming with VB.NET:
  - https://www.mcu.ac.in/wp-content/uploads/2020/04/1PGDCA4B-Part-I-Programming-with-VB-.Net .pdf
- Programming with visual Basic.Net (Notes in Hindi):
  - https://computerhindinotes.com/programming-with-visual-basic-net-notes-in-hindi/
- Programming with visual Basic.Net (Video Lectures in Hindi): https://computerhindinotes.com/visual-basic-net-video-tutorials-in-hindi.
- Visual Basic .NET The Complete Reference: https://ravithanki.files.wordpress.com/2010/10/complete-reference-vb\_net.pdf
- Learning Visual Basic.NET Language:
- https://riptutorial.com/Download/visual-basic--net-language.pdf.
- VB.NET Programming:
  - https://mkasoft.com/downloads/VB.NET%20programming.pdf.
- Visual Basic.Net:
- https://books-library.net/files/books-library.online\_noo25328f31569407903f036b-8313.pdf
- Visual Basic.Net Black Book:
  - https://bcaofficial.wordpress.com/wp-content/uploads/2017/05/vb-net-black-book.pdf.
- A Programmer's Introduction to Visual Basic.Net: https://www.interplat.com/vbnet.pdf.
- Visual Basic 2017 Made Easy:
- https://www.vbtutor.net/vb2017/vb2017me\_preview.pdf.

# PART -D: Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks:

100 Marks

Continuous Internal Assessment (CIA):

30 Marks

End Semester Exam (ESE):

70 Marks

Continuous Internal Assessment (CIA):

Internal Test / Quiz-(2): 20 +20 Assignment / Seminar -

10 Total Marks -

Better marks out of the two Test / Quiz obtained marks in Assignment shall be considered against 30 Marks

[By Course Teacher]

End Semester
Exam (ESE):

Two section — A & B
Section A: Q1. Objective — 10 x1= 10 Mark; Q2. Short answer type-5x4=20 Marks
Section B: Descriptive answer type qts., 1 out of 2 from each unit-4x10=40 Marks

Name and Signature of Convener & Members of CBoS:
Chairman
School Marks

Chairman
School Marks

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# FOUR YEAR UNDERGRADUATE PROGRAM (2024 – 28) DEPARTMENT OF INFORMATION TECHNOLOGY COURSE CURRICULUM

			ction			075
	_	Bachelor in S Diploma / De	the second secon	Semester - IV	Session: 2024-2	.025
1 Course Code			ITSC-04P			
2	Course	Title	Lab 4: Programming in .Net Practical			
3	Course	Type				
1	Prerequisite  Course Learning		As per program		to the second se	
5			After Completing this course, students will be able to:  Study and use of .NET framework and object-oriented programming.  Develop the console and GUI applications using .Net programming.  Evaluate the .NET framework namespace contents.  Understand the procedures, File I/O, Error handling and Message queue  Understand and remember the components in .NET IDE, ADO.NET and the window forms.  Design, create, build, and debug dot net applications.  Credits   Credit = 30 Hours Laboratory or Field Learning/Training.			eues. and also
6	Credi	t Value			sing Marks: 20	
7		Marks	Max. Marks:	There is a second of the secon	And the second s	
PΔ	RT -E	: Conte	nt of the Cou	ITSE Pariods:	30 Periods (30 Hours)	
-		Total No	o. of learning-Train	ning/performance Periods: List of Experiments		No. of
pr	list of ractical eriments	number 2. Write a 3. Write a	s.  program to find the	e maximum between three nu whether a number is negative, whether a year is a leap year of input marks of five subject	mbers. , positive or zero.	

अध्या के जिस्सा उटेल शहीय न सार उटेल विश्वी जन्म भागाह (छ.ग.) 12000

- 8. Write a program to convert decimal to binary number system using bitwise operators.
- 9. Write a program to swap two numbers using the bitwise operator.
- 10. Write a program to create Simple Calculator using a select case.
- 11. Write a program to find the sum of all natural numbers between 1 to n.
- 12. Write a program to enter any number and print its reverse.
- 13. Write a program to enter any number and check whether the number is palindrome or not.
- 14. Write a program to check whether a number is Armstrong number or not
- 15. Write a program to print Fibonacci series up to n terms.
- 16. Write a program to print Pascal triangles up to n rows.
- 17. Write a program to print all negative elements in an array.
- 18. Design a digital clock using timer control
- 19. Create an application that offers various food items to select from check boxes and a mode of payment using a radio button. It then displays the total amount
- 20. Create an application to implement the working of Context menu on textbox
- 21. Write a program to illustrate all functionalities of list box and combo box.
- 22. Write a program for temperature conversion using a radio button.
- 23. Write a program to launch a rocket using Picture Box and Timer control
- 24. Write a program to change the back color of any control using a scroll box.
- 25. Write a program to search an element for a one dimensional array.
- 26. Design a menu such that it contains submenu such as Addition, Subtraction, Scalar Multiplication, and Transpose of two metrics.
- 27. Write a program to find greatest among three given number using user define
- 28. Write a program to check whether given number neon or not using user defined
- 29. Write a program to check whether a given number is Niven or not using
- 30. Write a program to check whether a given number is duck number or not
- 31. Write a program to check whether a given number is a spy number or not.
- 32. Write a program to check whether a given number
- 33. Design the following application using radio button and checkbox:
- 34. Develop an application which is similar to notepad using menus.
- 35. Develop an application for facilitating purchasing order.
- 36. Develop an application for a billing system in a coffee shop.
- 37. Develop an application which is similar to login form.
- 38. Define structure student structure student has written member for storing name roll number name of three subjects and marks with member function to store
- 39. create a class circle with data member radius provide member function to calculate area driver class fare from class circle provide member function to calculate volume derived class cylinder from class is fair with additional data member for height and member function to calculate volume
- 40. Write a program that implements the concept of encapsulation.
- 41. Write a program to demonstrate the concept of function overloading.
- 42. Create a class student having a data member to store roll number name of the student name of three subject Max marks, Min marks, and obtained marks. Declare an object of class. Provide facilities to input data in data members and display result of students
- 43. Create a class array having an array of integer having five elements at data member provide following facilities: a) constructor to get number in array element b) sort the elements

44. Create a table for employees and write a program using a data set to add, delete, edit and navigate records. 45. Write a program to access a database using ADO.NET and display key columns in the combo box or list box when an item is selected in it its corresponding records are shown in data grid control.

46. Write a program to calculate factorial of a number using user defined procedure. Note: This is a tentative list; the teachers' concern can add more program as per

requirement.

Keywords

.NET, Window form, GUI, MDA ADO.Net.

Signature of Convener & Members of ChoS:

Chedrman

Learning Resources PART-C:

Text Books Recommended:

Visual Basic .Net Complete- by BPB Publications , New Delhi

The Complete Reference VB.Net -by Jeffery R. Shapiro, Tata Mcgraw Hill.

Bill Evjen, Jason Beres, et.al, Visual Basic .Net programming, Wiley Dreamtech India (p) Ltd.

## Reference Books Recommended:

Professional VB.Net 2003 - by Bill Evjen & others, Wiley Dreamtech India(P) Ltd. New Delhi

Fergal Grimes, Microsoft .NET for programmers, Shroff Publishers & Distributors (P) Ltd.

Thuan Thai & Hoang Q.Lam, .NET Framework Essentials, Shroff Publishers & Distributors (P)

MSDN online - by Microsoft

### Online Resources:

VB.Net Basic Tutorial: https://www.tutorialspoint.com/vb.net/vb.net\_loops.htm.

VB.NET Tutorial:

https://www.javatpoint.com/vb-net.

- VB.NET Tutorial for Beginners; Learn VB.Net Programming: https://www.guru99.com/vb-net-tutorial.html?gpp&gpp\_sid.
- Home and Learn: VB Net Programming Course Contents: https://www.homeandlearn.co.uk/NET/vbNet.html.

https://www.mcu.ac.in/wp-content/uploads/2020/04/1PGDCA4B-Part-I-Programming-with-VB-.Net .pdf

Programming with visual Basic.Net (Notes in Hindi): https://computerhindinotes.com/programming-with-visual-basic-net-notes-in-hindi/

Programming with visual Basic.Net (Video Lectures in Hindi): https://computerhindinotes.com/visual-basic-net-video-tutorials-in-hindi.

Visual Basic NET The Complete Reference: https://ravithanki.files.wordpress.com/2010/10/complete-reference-vb\_net.pdf

Learning Visual Basic.NET Language: https://riptutorial.com/Download/visual-basic--net-language.pdf.

VB.NET Programming: https://mkasoft.com/downloads/VB.NET%20programming.pdf.

https://books-library.net/files/books-library.online\_noo25328f31569407903f036b-8313.pdf Visual Basic.Net:

Visual Basic.Net Black Book:

https://beaofficial.wordpress.com/wp-content/uploads/2017/05/vb-net-black-book.pdf.

A Programmer's Introduction to Visual Basic.Net: https://www.interplat.com/vbnet.pdf.

Visual Basic 2017 Made Easy:

https://www.vbtutor.net/vb2017/vb2017me\_preview.pdf.

Introduction and Programming of dotNet: www.w3school.com

PARI	-D:	Asses	sment	and	Evalu	ation
Suggest	ed Co	ntinuous	Evaluation	n Meth	ods	

Total Marks -

Maximum Marks:

50 Marks

Continuous Internal Assessment (CIA): End Semester Exam (ESE):

15 Marks 35 Marks

15

Continuous Internal Assessment (CIA):

Internal Test / Quiz-(2): 10 & 10 Assignment/Seminar +Attendance - 05

Better marks out of the two Test / Quiz obtained marks in Assignment shall be considered against 15 Marks

(By Course Teacher) **End Semester** 

Exam (ESE):

Laboratory / Field Skill Performance: On spot Assessment A. Performed the Task based on lab. work

Managed by - 20 Marks Course

C. Viva-voce (based on principle/technology)

B. Spotting based on tools & technology (written) - 10 Marks 05 Marks teacher as per lab. status

Name and Signature of Convener & Members of CBoS: Dr. H. 5 HOKA

Cheirman

ANJEETA KUJU

# FOUR YEAR UNDERGRADUATE PROGRAM (2024 – 28) DEPARTMENT OF INFORMATION TECHNOLOGY COURSE CURRICULUM

	_	am: Bachelor in icate / Diploma / De		Semester – III	Session: 2024	-2025
1		ourse Code	ITSE-01			
2	C	ourse Title	Data Structure			
3	-	ourse Type	DSE (Discipline Spe	cific Elective) .		
4	-	rerequisite	As per program		to it is not a structured in	
5	C	ourse Learning. outcomes (CLO)	At the end of this course  Understand the  Create the algor  Understanding a	e, the students will be able to fundamentals and applicatio ithms for the problem solvir about the data management i Queue, Lists, Trees and Gr ble searching and sorting met	ns of data structure ig n computer memory aphs in various problem	solving.
6	C	redit Value	4 Credits	Credit = 15 Hours - Le	earning & Observati	on
7		otal Marks		100 Mir		0
	·		nt of the Cours	e	A Comment of the Comm	
	100	Total No. of Tea	ching-Learning Perio	ods (01 Hr. per period)	- 60 Periods (60 Hou	ırs)
Uı	 iit			(Course contents)		No. 01
		A part of the first of the firs	_			Perioc
in francisco		Primitive, Non-Prin and Nonlinear Data calculations of Ar Operations Like IN	Basic Concepts: Introdumitive Absent Data Type a Structure. Array: Array ray. Sparse Array. Lin	ection, Fundamentals of Algarithms (ADT), Classification of East and its types, Memory a ked List: Types of Link VERSE. Introduction and	llocation and address ed List and various	Period
I		Primitive, Non-Prin and Nonlinear Data calculations of Ar Operations Like In and Queue.  Stack: Definition, Applications of St Postfix expression Queue: Definition, operations of Queue and Linked list, Ap	Basic Concepts: Introdumitive Absent Data Type a Structure. Array: Array Array, Sparse Array. Linusert, Delete, TRA Operations PUSH, POPack: Infix, Prefix, Postfevaluation using Stack, I Types of Queues: Priorie INSERT, DELETE, The plications of Queue.	tetion, Fundamentals of Algorithms (ADT), Classification of Days and its types, Memory a ked List: Types of Link VERSE. Introduction and June 1997. Implementations using A fix representation and confecursion using Stack. The Stack of Sta	Ilocation and address ed List and various Application of Stack rray and Linked list, version using Stack, Couble Ended Queue, n Queue using Array	
1		Primitive, Non-Prin and Nonlinear Data calculations of Ar Operations Like In and Queue.  Stack: Definition, Applications of St Postfix expression Queue: Definition, operations of Queue and Linked list, Ap  Tree: Definition of operations Insertion order traversal, Bin Graph: Definition of generation of generations are generated as a second control of the principle of the p	Basic Concepts: Introdumitive Absent Data Type a Structure. Array: Array Array, Sparse Array. Linus SERT, DELETE, TRA Operations PUSH, POPack: Infix, Prefix, Postfevaluation using Stack, Interpretation of Queue. In Types of Queues: Priorice INSERT, DELETE, The plications of Queue. In the types of Queue. In the types of Graph and their types of Graphs, Graph Traversal traphs; Weighted Graph	tetion, Fundamentals of Algorication, Fundamentals of Algorication, Classification of Elys and its types, Memory a ked List: Types of Link VERSE. Introduction and Types of Link VERSE. Introduction and Confecution and Confecution and Confecution using Stack. The Stack of Circular queue, Electronication, Binary trees, Properties and traversal algorithm: presentations, AVL Trees. Stack of Confecutions, AVL Trees. Stack of Confecutions and Confecutions of Confec	Ilocation and address ed List and various Application of Stack rray and Linked list, version using Stack, ouble Ended Queue, in Queue using Array of Binary trees and order, post order, in-  [matrix & linked list] Depth first Traversal,	15
1	I II	Primitive, Non-Prin and Nonlinear Data calculations of Ar Operations Like In and Queue.  Stack: Definition, Applications of St Postfix expression Queue: Definition, operations of Queue and Linked list, Ap  Tree: Definition of operations Insertion order traversal, Bin Graph: Definition Representation of g Connectivity of G Minimum Spanning  Sorting Methods:  Merge Sort, Radix	Basic Concepts: Introdumitive Absent Data Type a Structure. Array: Array array, Sparse Array. Linus SERT, DELETE, TRACOPERTOR OPERATION OF THE STACK OPERATION OF THE STACK OPERATION OF THE STACK OPERATION OF THE STACK OPERATION OF OPERATION OPE	ction, Fundamentals of Algeral (ADT), Classification of Elegen and its types, Memory a ked List: Types of Link VERSE. Introduction and Interpretation and Confection using A Elegen and Elegn and Elegen and Eleg	Ilocation and address ed List and various Application of Stack rray and Linked list, version using Stack, Double Ended Queue, in Queue using Array of Binary trees and order, post order, informatrix & linked list) Depth first Traversal, him, Spanning Tree, bble Sort, Quick Sort,	15 15
I)	III	Primitive, Non-Prin and Nonlinear Data calculations of Ar Operations Like In and Queue.  Stack: Definition, Applications of St Postfix expression Queue: Definition, operations of Queue and Linked list, Ap  Tree: Definition of operations Insertion order traversal, Bin Graph: Definition Representation of g Connectivity of G Minimum Spanning  Sorting Methods:  Merge Sort, Radix	Basic Concepts: Introdumitive Absent Data Type a Structure. Array: Array Array, Sparse Array. Linusert, Delete, TRA Operations PUSH, POPack: Infix, Prefix, Postfevaluation using Stack, Infix, Delete, Transplications of Queues: Priori e INSERT, Delete, Transplications of Queue.  In Trees and their types of Graph and their types of Graph and their types array Search Trees, Imple of Graph and their types of Graph and their types of Graph Traversal traphs; Weighted Graph Tree, Kruskal's and Prefix Types of Sorting Selections of Type (ADV), Array, Link	ketion, Fundamentals of Algorithms, Fundamentals of Algorithms, Fundamentals of Algorithms, Fundamentals of Algorithms, Fundamentalism, Implementations using Algorithms and confection using Stack, and Instrumentation of English of the Fundamentation, Binary trees, Properties and traversal algorithm: presentations, AVL Trees, Adjacency and Incident (Breadth first Traversal, Inst., Shortest Path Algorithms, Shortest Path Algorithms, Sont, Insertion Sort, But Inser	Ilocation and address ed List and various Application of Stack rray and Linked list, version using Stack, Double Ended Queue, in Queue using Array of Binary trees and order, post order, informatrix & linked list) Depth first Traversal, him, Spanning Tree, bble Sort, Quick Sort,	15 15

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# PART-C: Learning Resources

Text Books, Reference Books and Others

## Text Books Recommended:

- Michael T. Goodrich, Data Structures and Algorithms in C++, Wiley
- Horowitz and Sahani, Fundamentals of Data Structures, Computer Science Press.

## Reference Books Recommended:

- Alfred V. Aho, Data structures and Algorithms, John E. Hopcroft and J.E. Ullman.
- Jean Paul Trembley and Paul Sorenson, An Introduction to Data Structures with Applications, TMH, International Student Edition
- R. Kruse, Leung & Tondo, Data Structures and Program Design in C, PHI publication, 2<sup>nd</sup> Edition

## Online Resources:

- NPTEL YouTube Channel: Data Structure Complete course https://youtube.com/playlist?list=PLc2MoXNv7E4mtsPlnn9BnTOENXsGyoDgR&si=aAYaVZ-vWfeuhFEO
- NPTEL YouTube Channel: Introduction to Data Structure https://www.youtube.com/watch?v=zWg7U00EAoE&list=PLBF3763AF2E1C572F&index=1
- NPTEL YouTube Channel: Stacks https://www.youtube.com/watch?v=g1USSZVWDsY&list=PLBF3763AF2E1C572F&index=2
- NPTEL YouTube Channel: Queues and linked list https://www.youtube.com/watch?v=PGWZUgzDMYI&list=PLBF3763AF2E1C572F&index=3
- NPTEL YouTube Channel: Trees https://www.youtube.com/watch?v=tORLeHHtazM&list=PLBF3763AF2E1C572F&index=6
- NPTEL YouTube Channel: Graphs https://www.youtube.com/watch?v=9zpSs845wf8&list=PLBF3763AF2E1C572F&index=24
- W3schools Data Structure Reference DSA Tutorial (w3schools.com)

يبي الله المحددالة المداد الكراهورة الماستدان	Seed from the		
PART -D: Ass	ess	ment and Evaluation	
Suggested Continu Maximum Marks:		Evaluation Methods: 100 Marks	
Continuous Intern			andara da Barata de Carlo de Primirio de Carlo de
End Semester Exam	m (ES	SE): 70 Marks	
Continuous Inter	nal	Internal Test / Quiz-(2): 20 & 20	Better marks out of the two Test /
Assessment (CIA	.):	Assignment / Seminar - 10 Total Marks - 30	Quiz + obtained marks in Assignment
(By Course Teacher	)	Total Marks - 30	shall be considered against 30 Marks
End Semester Exam (ESE):	Secti Secti	section - A & B on A: Q1. Objective - 10 x1= 10 Mark; on B: Descriptive answer type qts.,1 out	
Name and Signature	of Co	onvener & Members of CBoS:	Dal Strick with
Dr. His Hora	Krus	(Sould be A	D AM
chairman -	1	My	Jun - A L
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# FOUR YEAR UNDERGRADUATE PROGRAM (2024 – 28) DEPARTMENT OF INFORMATION TECHNOLOGY COURSE CURRICULUM

PA	IRT	T-A: Introd	uction			أحده وافساحهم
		m: Bachelorin		C IV	Session: 2024-2	2025
	_	ate / Diploma / De	그는 이 네트 사람이 있는 것이 되었다.	Semester - IV	Dession: 2024 -	
1		urse Code	ITSE-02	A STATE OF THE PARTY OF THE PAR		
2		urse Title	Internet and E-Comm	ierce		
3		urse Type	DSE (Discipline Speci	fic Elective)		
4		erequisite	As ner program			
5	Course Learning		At the end of this course, the students will be able to:  Understand the basic terminologies of the Internet.  Assess the impact of internet and internet technology in a business electronic commerce and electronic business.			lectronic
6	Cr	edit Value			assing Marks: 40	
7	To	tal Marks	IVERA. IVERTAGE			
A	RT	-B: Conte	nt of the Course	(1)	O Periods (60 Hours	s)
		Total No. of Tea	ching-Learning Period	ds (01 Hr. per period) - 6	Of crious (see	No. of
Un			Topics	(Course contents)		Period
I	5 1	applications, Doma service providers, downloading, uplo Message Component	Connectivity: dial up, ading files on Internet, Sents, Email Header, Adv	volution of internet, Internet browser, web server, web pag leased line, VSAT. Confer earch Engines, E-Mail: E-M vantages and Disadvantages	rencing, Searching, fail Address, Email	15
Ī	Ī	protocols: SMTP, J FTP and Telnet: (including anonyn Internet relay chat, on one server, Main	Introduction to File Tr nous), Telnet protocol, T Web publishing tool, We ntaining a website, WWW	ansfer Protocol (FTP), Typ Telnet client, Terminal emu ebsite planning, Website Ho 'servers, HTTP & URLs, Re	lation. Usenet and sting, Multiple sites gistration of website	15
1)	II	on search engines, E-Commerce and E-Business Models Commerce, Ethica Commerce Marke	Model: Definition, The services: B2B, B2C, C2C, C2B, I Issues, Electronic Data ting, E-Commerce Strate	scope of E-Commerce, Histo Environment of E-Commerc Interchange, Value Chain ar egy, E-Commerce Infrastru	ory of E-Commerce, be, Dimensions of E- nd Supply Chain, E- ncture, benefits and	15
IN	<b>V</b>	E-payment Syster Card, Smart Cards, position), payment transfer, automated	n and E-Security: Model , e-money, UPI payment), gateways, online banking I clearing house, automat k and Web Site Risk for	s and methods of e-payments digital signatures (procedure (meaning, concepts, imports ed ledger posting), risks inv E-Business, Information Te	s (Debit Card, Credit e, working and, legal ance, electronic fund volved in e-payment.	15
	ords	and its Highlights Internet, FTP and	Tembers of CBoS:	ynient Systems, Online Busine	ess. A service	- Y
Jr	·H·	Sittota Kren irman	Sub-	Sures Kalan		ANJECT

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#### PART-C: Learning Resources

Text Books, Reference Books and Others

#### Text Books Recommended:

- Teach Yourself Internet In 24 Hours: Techmedia.
- Internet Complete: BPB Publication
- Kenneth C. Laudon and Carlo Guercio Traver, E-Commerce, Pearson Education.
- David Whiteley, E-commerce: Strategy, Technology and Applications, McGraw Hill Education.

### Reference Books Recommended:

- Bharat Bhaskar, Electronic Commerce: Framework, Technology and Application, 4th Ed., McGraw Hill Education.
- PT Joseph, E-Commerce: An Indian Perspective, PHI Learning.
- KK Bajaj and Debjani Nag, E-commerce, McGraw Hill Education.
- TN Chhabra, E-Commerce, Dhanpat Rai & Co.
- Sushila Madan, E-Commerce, Taxmann
- TN Chhabra, Hem Chand Jain, and Aruna Jain, An Introduction to HTML, Dhanpat Rai & Co.

#### Online Resources:

- Internet and its Application https://www.javatpoint.com/internet
- Internet introduction

https://www.youtube.com/watch?v=YOXwcbwSEUo&list=PL04D5787E

- Ecommerce lecture series-Complete https://www.youtube.com/watch?v=hRdepe\_JJ80&list=PLUVwrWr8kmTisGDzotaG\_KnDJZfNY BPv8
- Electronic Payment System https://www.youtube.com/watch?v=Q5HdOaiNYps&list=PLb8zN-8LXfQAkHpezdSvGXFyxiRD5fRPE
- https://ebooks.inflibnet.ac.in/lisp5/chapter/internet-background-basic-services-and-features/
- https://www.tutorialspoint.com/internet\_technologies/pdf/internet\_quick\_guide.pdf
- Electronic Commerce: https://www.youtube.com/watch?v—xKJjyn8DaAw
- Technology used in E-Commerce: <a href="https://www.yoiitube.com/watch?v=cPVwPQCsROc">https://www.yoiitube.com/watch?v=cPVwPQCsROc</a>
- E-Commerce: https://www.tutorialspoint.com/e commerce/index.htm
- E-Commerce: https://egvankosh.ac.in/handle/123456789/72073

• E-Commerce: https://	egyankosh.ac.m/handle/123436789/	72073
	nent and Evaluation	
Suggested Continuous Eva Maximum Marks:	100 Marks	
Continuous Internal Asses End Semester Exam (ESE	): 70 Marks	
Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test / Quiz-(2): 20 & 20 Assignment / Seminar - 10 Total Marks - 30	Better marks out of the two Test / Quiz  + obtained marks in Assignment shall be considered against 30 Marks
Exam (ESE): Sec Sec	tion B: Descriptive answer type qts.,1	rk; Q2. Short unswer type- 5x4 =20 Marks out of 2 from each unit-4x10=40 Marks
Name and Signiture of Cont	Seele (CBoS:	I will the
cheirman In	the Committee Can	most Thanker, Sherry ANJERTH KU
	10/07	525 DETOXIM

# FOUR YEAR UNDERGRADUATE PROGRAM (2024 – 28) DEPARTMENT OF INFORMATION TECHNOLOGY COURSE CURRICULAR

Ce	ogram: Bachelor in rtificate / Diploma / D	Science (IT)	Semester - I/III/V	Session: 2024-2	2025
2	- Code	ITVAC-01	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1466
3	Course Title Artificial Intellige				
	Value Addition Course (VAC)				
1	Prerequisite As per program				
5	Course Learning Outcomes(CLO)	<ul><li>Understa</li><li>Understa</li><li>Aware at</li><li>Explore a</li></ul>	is course, students will be able to: and basics of AI. and problem solving techniques of AI. about AI tools. application of AI in various domains. and the current scenario of AI in India.		
б	Credit Value	2 Credits	Credit = 15 Hours -L	earning & Observation	
7	Total Marks	Max. Marks:	50	Min Passing Marks: 20	
A	RT = B: Conten	it of the Cou	irse		
	Total No. of Te	aching-Learning	Periods (01 Hr. per pe	riod) - 30 Periods (30 Hou	ırs) _
Uı	nit	Topics	(Course contents)		o of Period
	- T.4 . 1				
				ndations of AI, Areas and lexamples of AI, Future of	8
	Applications of AI AI.  Advanced AI: Ba	in various domain	s, AI in India, Impact and	l examples of AI, Future of earning, Computer vision.	8
1	Applications of AI AI.  Advanced AI: Ba Natural Language  II AI Tools: Conver	in various domainusic Concept of Ma Processing (NLP),	as, AI in India, Impact and achine Learning, Deep L Speech recognition, Gen	l examples of AI, Future of earning, Computer vision.	
1	Applications of AI AI.  Advanced AI: Ba Natural Language  II AI Tools: Convergeneration, Image  V Application of A Commerce, Indust	in various domain asic Concept of Ma Processing (NLP), rsational AI: ALE creation, Presentat AI: Agriculture, I ry, Research etc.	as, AI in India, Impact and achine Learning, Deep L Speech recognition, Gen XA, CORTANA, SIRI ion, Video editing etc. Healthcare, Environment	earning, Computer vision, erative AI Applications. etc., AI tools for content t, Teaching-Learning, E-	8 8
1 I	Applications of AI AI.  Advanced AI: Ba Natural Language  II AI Tools: Convergeneration, Image  V Application of A Commerce, Indust Artificial Intelligence	asic Concept of Ma Processing (NLP), rsational AI: ALE creation, Presentat AI: Agriculture, I ry, Research etc.	as, AI in India, Impact and achine Learning, Deep L. Speech recognition, Gen XA, CORTANA, SIRI ion, Video editing etc. Healthcare, Environmentarning (ML), Deep Learning	earning, Computer vision, erative AI Applications. etc., AI tools for content t, Teaching-Learning, E-	8  8  6  I Language
I I I I I I I I I I I I I I I I I I I	Applications of AI AI.  Advanced AI: Ba Natural Language  II AI Tools: Convergeneration, Image  V Application of A Commerce, Indust Voords Artificial Intelligence Processing (NLP), Containe of Convener & M Chairman	sic Concept of Ma Processing (NLP), rsational AI: ALE creation, Presentat AI: Agriculture, I ry, Research etc. e (AI), Machine Le conversational AI, Ge	as, AI in India, Impact and achine Learning, Deep L. Speech recognition, Gen EXA, CORTANA, SIRI ion, Video editing etc.  Healthcare, Environment carning (ML), Deep Learning enerative AI.	earning, Computer vision, erative AI Applications. etc., AI tools for content t, Teaching-Learning, E- ing, Computer Vision, Natural	8  8  6  I Language
I II I	Applications of AI AI.  Advanced AI: Ba Natural Language  II AI Tools: Convergeneration, Image  V Application of A Commerce, Indust Verds Artificial Intelligence Processing (NLP), Containe of Convener & M Convener	in various domain asic Concept of Ma Processing (NLP), resational AI: ALE creation, Presentat AI: Agriculture, It ry, Research etc.  It (AI), Machine Lectonversational AI, Gomembers of CB of State of C	achine Learning, Deep L. Speech recognition, Gen EXA, CORTANA, SIRI ion, Video editing etc.  Healthcare, Environment arming (ML), Deep Learning enerative AI.	earning, Computer vision, erative AI Applications. etc., AI tools for content t, Teaching-Learning, E- ing, Computer Vision, Natural	8  8  6  I Language

• Introduction to Artificial Intelligence and Expert Systems, Dan W. Patterson, PHI Publication.

Artificial Intelligence, Elaine Rich and Kevin Knight TMH publication.

Onicar-in-Charge (Academie)
Shehood Nanckumar Petal.
Vietwavidyalaya, Reigerh (O.G.)

ud शहीर नेद्रा मार पटेल शहीर नेद्रा मार पटेल शहीर नेद्रा मार पटेल शहीर नेद्रा मार पटेल शहीर कि पाट में स्ट्राहमार पटेल विश्व कि पाट में स्ट्राहमार पटेल

## Reference Books Recommended:

- Artificial Intelligence and machine learning, Vinod Chandra S.S., Anand Harcendrn S., PHI learning private Ltd.
- Foundations of Artificial Intelligence and Expert Systems, Macmillan Series in Computer Science,
   V.S. Jankiraman, K. Sarukesi and P. Gopala Krishnan.

#### Online Resources:

• Ministry of Electronics and Information Technology Portal for INDIAai:

https://indiaai.gov.in/

Introduction to Artificial Intelligence from SWAYAM:

https://www.youtube.com/watch?v=pKeVMlkFpRc&list=PLwdnzlV3ogoXaceHrrFVZCJKbm\_laSHcH&index=2

An introduction to Artificial Intelligence from SWAYAM:

https://onlinecourses.nptel.ac.in/noc24\_cs08/preview

- Introduction to Artificial Intelligence from Coursera: https://www.coursera.org/learn/introduction-to-ai
- Introduction to Artificial Intelligence: https://www.javatpoint.com/artificial-intelligence-ai
- How to Learn Artificial Intelligence from Coursera: <a href="https://www.coursera.org/articles/how-to-learn-artificial-intelligence">https://www.coursera.org/articles/how-to-learn-artificial-intelligence</a>

Suggested Continuous l	Evaluation Methods:	(14) 15 15 15 15 15 15 15 15 15 15 15 15 15
MaximumMarks:	50 Marks	생활됐다. 하고 생기는 시험하는 경험에 걸린 경험을 받다.
Continuous Internal As	sessment(CIA): 15 Marks	서울 경우 기교 사이 지역 교육 있는 지원이 없는 것이다.
End Semester Exam(ES	SE): 35 Marks	
Continuous	Internal Test / Quiz-(2): 10 + 10	Better marks out of the two Test / Quiz +
InternalAssessment(	Assignment/Seminar- 05	obtained marks in Assignment shall be
CIA):	Total Marks -	considered against 15 Marks
(By Course Teacher)		
End Semester Exam (ESE):	Laboratory/Field Skill Performance: A. Performed the task based on lear B. Spotting based on tools (Written) C. Viva-voce (based on principle/tec	ned skill - 20 Marks   Coordinator as per - 10 Marks   skilling
Dr HS. Holy & Chairman	Convener & Members of CBoS:	Gral Marine John Ja

Office-In-Oharge (Asademir) Shahood Nandkumar Patel Vishwavidyalaya, Flaigarh (C.G.) अध्योगन मुक्त

विश्वविद्यालय, राय

# FOUR YEAR UNDERGRADUATE PROGRAM (2024 – 28) DEPARTMENT OF INFORMATION TECHNOLOGY COURSE CURRICULUM

I	ogran	m: Bachelor ir	Science (IT)	Semester - II/IV/V/VI	Session: 2024-2	2025
		ite / Diploma / L		Demostar III		
	Cour	rse Code	ITSEC-01			
	Course Title		MS-Office			
	Cou	rse Type	SEC (Skill Enhancement Course)			
	Prer	equisite	As per program			
5		rse Learning comes (CLO)	After Completing this course, students will be able to:  Study and use of basic concepts and terminology of information technology.  Organize files and documents on storage devices.  Acquire knowledge of ICT and Internet applications.  Develop information technology solutions by evaluating user requirements in advance trends of IT.  Acquire knowledge of MS-Excel, MS-PowerPoint and MS-Access.  Credits   Credit = 15 Hours Theoretical Learning and   Credit = 15 Hours Theoretical Learning (Training)			
6	Cree	dit Value	= 30 Hours Laboratory or Field Learning) Turning			
7		il Marks B: Conte	Max. Marks: 50 Min Passing Marks: 20		- M	
Module  Theory  Content		Creating to	S-Word: Introduction to word processing software and its features, eating new document, Saving documents, Opening and Printing documents. tting fonts, Paragraph settings, Find & Replace, Copy paste and paste special,			
		<ol> <li>Mail Merge, Spelling and Grammar check.</li> <li>MS-Excel: Introducing Excel, Use of Excel sheet, creating new sheet, Saving, Opening, and Printing workbook. Font, Alignment, Number, Styles and cells and editing, Table, Charts, Page setup options.</li> <li>PowerPoint: Introducing PowerPoint, Use of PowerPoint presentation, Creating new slides saving, Opening and printing, Layout, Setting text direction, Align text, Convert to smart art, Drawing options, Table, Picture, Clipart, Smart art, Shapes and chart, Movie and sound, Hyperlink and action, Text box, Word art, Object.</li> </ol>				15
		new slides s	aving, Opening and	d printing, Layout, Setting text to	t, Smart art, Shapes	
Tre	b/Field aining ontent	new slides s Convert to and chart, M Create a w setting etc. Create a exc	saving, Opening and smart art, Drawing Movie and sound, Ford document and sel sheet and do folge predefine functions and do	options, Table, Picture, Clipar (yperlink and action, Text box, do followings: page setup, p lowings: cell formatting, page s	t, Smart art, Shapes Word art, Object. aragraph setup, tab setup, creating chart	30
Tre	aining	new slides s Convert to and chart, M Create a w setting etc. Create a exc and use son Create a pr show setting	saving, Opening and smart art, Drawing Movie and sound, Ford document and sel sheet and do folge predefine functions and do	options, Table, Picture, Clipar (yperlink and action, Text box, do followings: page setup, p lowings: cell formatting, page son. followings: slide animation, te	t, Smart art, Shapes Word art, Object. aragraph setup, tab setup, creating chart	30

(Almehearl)

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#### PART-C: Learning Resources

## Text Books, Reference Books and Others

### Text Books Recommended:

- Computer Fundamentals, P.K. Sinha, BPB Publication, Sixth Edition.
- Fundamentals of Information Technology, Chetan Shrivastava, Kalyan Publishers.
- Fundamentals of Computers, V. Rajaraman, PHI Sixth Edition.
- Computer Fundamentals and Office Automation, Dr. Santosh Kumar Miri, Iterative International Publisher IIP.
- Computer Fundamentals Architecture and Organization, B. Ram, New Age International Publishers, Fifth Edition.
- Fundamentals of Information Technology, Alexis Leon and Mathews Leon, Vikash Publication.

### Reference Books Recommended:

- Introduction to Information Technology, V. Rajaraman, PHI publication.
- Fundamental of IT, Leon and Leon, Leon Tec world.
- Introduction to Information Technology, Aksoy and Denardis, Cengage learning.
- Computers Today, Suresh K. Basandra, Galgotia Publications.
- Information Technology The breaking wave, Dennis P.Curtin, Kim Foley, Kunai Sen and Cathleen Morin, TMH.
- OFFICE 2013 in Simple Steps, Kogent Solution Inc., DremTech Press.
- Access 2010 in Simple Steps by Kogent Learning Solutions Inc.

#### Online Resources:

- Introduction to Computer Fundamental from W3school: https://www.w3schools.blog/computer-fundamentals-tutorial
- Introduction to MS-Word from W3school: https://www.w3schools.blog/ms-word-tutorial
- Introduction to MS-Excel from W3school: https://www.w3schools.com/excel/excel introduction.php
- Introduction to MS-PowerPoint from W3school: https://www.w3schools.blog/powerpoint-tutorial
- Introduction to MS-Access from W3school: https://www.w3schools.com/sql/sql\_ref\_msaccess.asp
- Fundamentals of Computers & Information Technology (in Hindi): https://www.mcu.ac.in/wp-content/uploads/2020/04/1PGDCA1-Unit-I-Fundamentals-of-Computers-Information-Technology.pdf.
- Fundamentals of Computers & Information Technology (in Hindi): https://hte.rajasthan.gov.in/dept/dte/board of technical education, rajasthan/government polytechnic college hanumangarh/uploads/doc/fundamental- final-rkd.pdf.
- Information and Computers Technology: https://cbscacademic.nic.in/web\_material/doc/2014/11\_ICT-IX.pdf.pdf.
- Microsoft Office (in Hindi); https://www.scribd.com/document/534988849/9-Microsoft-office-in-hindi-www-GkNotesPDF-com.
- MS-OFFICE: https://www.rgycsm.org/uploads/books/MICROSOFT-OFFICE-BOOK.pdf.
- MS-OFFICE:
  - Hindi Notes: https://www.copaguide.com/2020/04/ms-office-topics.html.
- Microsoft Office Full Crash Course: https://www.youtube.com/watch?v=SH4oyV5AJ6A

PART -D: Assessment and Evaluation

Chairman

Office Including Patel

शाहीद नंदस्मार गटेल nshwarth, alaya, Raigarh (C.C.)

Suggested Continuous Evaluation Methods: Maximum Marks: 50 Marks Continuous Internal Assessment (CIA): 15 Marks End Semester Exam (ESE): 35 Marks Better marks out of the two Test / Quiz Continuous Internal 10 & 10 Internal Test / Quiz-(2): + obtained marks in Assignment shall Assessment (CIA): Assignment/Seminar +Attendance - 05 be considered against 15 Marks (By Course Teacher) 15 Total Marks -Managed by Laboratory / Field Skill Performance: End Semester. Course On spot Assessment Exam (ESE): teacher as per - 20 Marks A. Performed the Task based on lab. work B. Spotting based on tools & technology (written) - 10 Marks lab, status - 05 Marks Viva-voce (based on principle/technology) Name will Signature of Convener & Members of CBoS: Dr. Hos Hota Cherman

अध्ययन मध्ये अध्यान (ए.ज.) द्वारा प्राप्त (ए.ज.) द्वारा प्राप्त (ए.ज.) द्वारा प्राप्त (ए.ज.)