



BHAVAN'S
BHAGWANDAS PUROHIT VIDYA MANDIR
NAGPUR

CURRICULUM PLAN

Session 2019-2020

Std: - XI Subject: INFORMATICS PRACTICES (065)

abhinavkemi
Smt. Anju Bhutani
Principal
Bhavan's B. P. Vidya Mandir,
Civil Lines, Nagpur

Pr
Smt. P. Nirupama Shankar
Principal
Bhavan's B. P. Vidya Mandir,
Srikrishna Nagar, Nagpur

N. K. B.
Smt. Vandana Bisen
Principal
Bhavan's B. P. Vidya Mandir,
Ashti, Nagpur

K. Mishra
Ms. Kirti Mishra
Principal
Bhavan's Lloyds Vidya Niketan,
Wardha

16/2/19
Smt. Annapoorni Shastri
Director
Bhavan's Nagpur Kendra
Nagpur

MONTH	WEEKLY DATES	NO. OF PERIODS	TOPIC	SUBTOPIC	NO. OF PERIODS REQUIRED	ACTIVITIES	LEARNING OUTCOMES
June-2019	14-22 (6 Days)	9	Unit 1 : Introduction to Computer System	Basic computer organisation: describe a computer system Memory, hard disk,	9	Assignment No. 1 Make a list of the components and specifications required for a purchasing a new computer	Students will be able to * Understand Functional units of computer * Know about Data and Instruction flow using communication buses and ports * Learn about various secondary storage devices
				I/O, battery, power, Transition from a calculator to a computer	5		
	24-29 (6 Days)	9		Trouble shooting with parts of computer and basic operations of operating system, Basic concept of Data representation Binary, ASCII and Unicode	4		
July-2019	01-06 (06 Days)	9	Unit 4: Data Management	Relational databases: Concept of a database, relations, attributes and tuples	4	Assignment No. 2 Download and Install MySQL	Students will be able to * recognise different parts of a table like row and column * able to install and use MySQL * Express the relation between database and tables. * Know different DBMS softwares.
				Candidate key, Primary key, Alternate key, Foreign key: Degree and Cardinality of a table.	5		
	8-12 (5 Days)	8		Use SQL -DDL/DML Commands to create table	4	Assignment No. 3 Create a student table with the student id, name, and marks as attributes where the student id is the primary key.	Students will be able to * Create Table and add Primary key and Foreign Key constraint
				Insert into, update table, delete from,	4		

MONTH	WEEKLY DATES	NO. OF PERIODS	TOPIC	SUBTOPIC	NO. OF PERIODS REQUIRED	ACTIVITIES	LEARNING OUTCOMES
July-2019	15-20 (06 Days)	9	Unit 4: Data Management	Alter table, modify table, Drop table Keys and Foreign keys to view content of the table	4	Assignment No. 4 Insert the details of a new student in the student table.	Students will be able to store and retrieve data using and RDBMS
				Select- from- where- order by	5		
	Between, IN, Like(Queries only on single table)	4		Assignment No.5 Delete the details of a particular student in the student table.			
	Aggregate functions: MIN,MAX (Queries)	5		Assignment No6 Create a new table (name, date of birth) by joining two tables (student id, name) and (student id, date of birth).			
	Aggregate functions: AVG,COUNT,SUM(Queries)	4		Create a new table (order ID, customer Name, and order Date) by joining two tables (order ID, customer ID, and order Date) and (customer ID, customer Name, contact Name, country).			
29-31 (03 Days)	4						Students will be able to understand the Use of DDL and DML statements in MYSQL
Periodic Test 1 - 29th July 2019							
August-2019	01-03 (03 Days)	4		Cyber safety: safely browsing the web, identity protection	4		
	05-09 (05 Days)	7		confidentiality, social networks, netiquettes, digital footprint	5		

(3)

MONTH	WEEKLY DATES	NO. OF PERIODS	TOPIC	SUBTOPIC	NO. OF PERIODS REQUIRED	ACTIVITIES	LEARNING OUTCOMES
August-2019	13-16 (03 Days)	3-4	Unit 5: Society, Law and Ethics - Cyber safety	Cyber trolls and bullying	3	Assignment No. 7 * Comparative study of different Social Networking Sites * Make a list of different types of Malware, Adware, Viruses and Trojans	* Ability to understand societal, legal and ethical aspect of technology. * Ability to ensure safety and security in cyber-space.
	19-23 (05 Days)	8		Appropriate usage of social networks: spread of rumours	4		
	26-31 (05 Days)	8		Common social networking sites (Twitter, LinkedIn, and Facebook) and specific usage rules.	4		
				Safely accessing web sites: adware, malware, viruses, Trojans	4		
September-2019	03-05 (03 Days)	4	Unit 5: Society, Law and Ethics - Cyber safety	Safely communicating data: secure connections, eavesdropping	4	Assignment No. 8 Download and Install Python	Students will be able to * Appreciate the concept and importance of a Graphical User Interface and Integrated Development Environment.
				Phishing and identity verification.	4		
				Familiarization with the basics of Python programming	2		
				A simple "hello world" program	2		
September-2019	09-14 (05 Days)	8	Unit 2: Introduction to Python Programming	Process of writing a program, running it, and print statements	3	Assignment No. 8 Download and Install Python	Students will be able to * Declare, initialize and assign values to variables. * Write the simple application using variables. * Understand the concept and usage of different data types. * Appreciate the importance and usage of Arithmetic and Assignment operators.
				Simple data-types: integer, float, string	3		
				Introduce the notion of a variable	2		

14

MONTH	WEEKLY DATES	NO. OF PERIODS	TOPIC	SUBTOPIC	NO. OF PERIODS REQUIRED	ACTIVITIES	LEARNING OUTCOMES
September-2019	16-20 (05 Days)	8		Methods to manipulate it (concept of L-value and R-value)	2		
				Token- Keywords, identifiers, literals, Delimiters, Knowledge of datatypes and operators	3		
				Accepting input from the console	2		
				Assignment statement, expressions	2		
				Operators and their precedence.	1		
				Conditional statements: if	3	Assignment No:-9	
				Programs based on If statement	3	To Find average and grade for given marks	
				Conditional statements :if-else Programs based on if else statements	3	To find amount for given cost-qty- discount , To calculate cost perimeter- wise/area-wise, To calculate interest, To calculate profit-loss for given cost and sell Price, To calculate EMI for Amount, period and Interest, To calculate tax.	Students will be able to understand the concept of conditional statements in Python
October-2019	14-19 (06 Days)	9					
	21-23 (03 Days)	4		Conditional statements :if-elif-else Programs based on if elif else statements	4		
Half Yearly Examination 01st October 2019							
	01-02 (02 Days)	3		Simple programs eg. Divisibility	3		
				Notion of iterative computation and control flow: for(range(), len()), while, flowcharts	2	Assignment No.10 Find the sum of squares of the first	Student will be able to understand Iterative statements in Python

5

MONTH	WEEKLY DATES	NO. OF PERIODS	TOPIC	SUBTOPIC	NO. OF PERIODS REQUIRED	ACTIVITIES	LEARNING OUTCOMES
November-2019	04-08 (05 Days)	7-8	Unit 2: Introduction to Python Programming	Error Finding, Output Finding and Conversion from For to While and Vice versa	3	100 natural numbers Given two integers x and n, compute x^n Compute the greatest common divisor and the least common multiple of two integers.	
				List and dictionary: Finding the maximum, minimum and mean	3	Assignment No. 11 Find the largest and smallest numbers in a list.	
				Linear search on a list of numbers Counting the frequency of elements in a list using a dictionary	3	Find the third largest number in a list.	
	11-16 (05 Days)	7					
	18-23 (06 Days)	9		Introduction to Lists and dictionary	3		
	25-30 (06 Days)	4		Counting the frequency of elements in a list using a dictionary	4		
Periodic Test 2 - 04th November 2019							
December-2019	02-07 (06 Days)	9		Text handling: Compare and Concat Text handling: Substring operations. (Without using string module)	5		STUDENTS WILL APPRECIATE THE concept of Text handling in Python
	09-14 (06 Days)	9		Introduction to Python modules Importing math (sqrt, ceil) Importing math (floor, pow, fabs)	3		
					3		
					3		

Sub :- Informatics Practices (XI)-2019-20

(6)

MONTH	WEEKLY DATES	NO. OF PERIODS	TOPIC	SUBTOPIC	NO. OF PERIODS REQUIRED	ACTIVITIES	LEARNING OUTCOMES	
December-2019	16-20 (05 Days)	7		random(random, randint, randrange) Statistics(mean, median, modules)	3 4	Assignment No:-12 * Import numpy array as 'np' and print the version. * To create a numpy array of 1D containing numeric values 0 to 9. * To		
	02-04 (03 Days)	3-4		Numpy 1D array	3			
	06-10 (05 Days)	7-8		Numpy 2D array Numpyarrays with Python list Numpy datatypes	4 4 4			
	13-18 (05 Days)	7-8		Ways to create Numpy arrays	4	create a numPy array with all values as true. * To extract odd and even numbers from numPy array. * To	Students will understand the concept of Numpy array and able to do array slices, joins and subsets. They will learn how to apply basic arithmetic operations on 1D and 2D array.	
January-2020	20-25 (06 Days)	9	Unit 3: Data Handling	Creating 1D array using functions Creating 2D array using functions 1D array joining 2D array joining	5 4 5 4	copy the contents of an array A to another array B replacing all odd numbers of array A with -1 without altering the original array A		
	27-31 (06 Days)	9						
Periodic Test 3 - 06th January 2020								
February-2020	03-08 (06 Days)	8	Unit 3: Data Handling	Slicing of 1D array Slicing of 2D array	5 4	Assignment No 13:- * To replace all odd nos in numPy array with -		
	10-15 (06 Days)	9		Basic Arithmetic operations on 1D array Basic Arithmetic operations on 2D array	5 3	1. * To copy content of 1D array into 2D array with 2 rows. * To perform basic arithmetic operations on 1D and 2D array.		
	17-22 (04 Days)	6		Subset of arrays	6			
	24-29 (06 Days)	9		Revision for annual promotion examination	9			
Annual Promotion Examination - 04th March 2020								
Date: 08/05/2019	1) Mr. Manish Bansingel (SKN)			2) Mr. Yogesh Sawarkar (ASHTI)		3) Ms. Rupali Aglawe (BLVN, Wardha)		