Janata Shikshan Sanstha's

KISAN VEER MAHAVIDYALAYA, WAI

Certificate Course in Python

Supportive Documents for Certificate Course Annual Report

Supportive Documents for

Certificate Course Annual Report includes-

1. Short Report of the Particular Academic Year
2. Certificate Course Brochure/Handbook
3. Notice regarding the Introduction date of the course & BOS Resolution
4. Syllabus of the Course
5. Course Objectives and Outcomes
6. List of enrolled students
7. Time Table
8. Attendance Sheets
9. Result of the Course
10. One Sample Certificate of the pass student

Janata Shikshan Sanstha's

KISAN VEER MAHAVIDYALAYA, WAI

Department of Mathematics

"Certificate Course in Python"

Course Report: 2021-22

The department of Mathematics had decided to conduct a certificate course for B.Sc. III in departmental meeting. The title of the course is "Certificate Course in Python" was finalized. The notification and advertisement were made through our college website and Brochure of the course was uploaded on the college website. The course was started on 22nd Nov 2022. The timetable was displayed on the department's notice board.

5 students were admitted for the said course. Regular lectures and practicals were conducted according to the time-table. Department of BCA, Statistics and Mathematics in Collaboration with Patil Academy, Satara organized Three-day workshop on "Python in Future Technologies" on 18th, 20th and 22nd December 2021. Examination of the said course was conducted and certificates were issued to all the passed students. Students gained the knowledge about programming using Python and one more certificate along with the B.Sc. degree. The supportive staff and the administration of the College and specially Hon. Principal supported a lot.

The record of the course has maintained in the department. One copy had given in IQAC cell and same had been uploaded on college website.

Dr. S. R. Tate
Course Coordinator
Department of Mathematics

Dr. Gurunath. J. Fagare
Principal
Kisan Veer Mahavidyalaya, Wai

2. Certificate Course Brochure/Handbook

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Kisan Veer Mahavidyalaya, Wai

Department of Mathematics

CERTIFICATE COURSE IN PYTHON

Eligibility: B.Sc. Part Ill (Mathematics) Students

Introduced: since academic year 2021-22

DURATION 03 Months

FEES:- Rs.500/-

Objectives:

- To understand the basic concept of programming using Python
- To create an awareness of the importance of Python in Computer Programming
- To learn how to read and write files in Python
- To develop the ability to write the program for the problem related their subjects

Contact

Dr. S.R. Tate (Course co-ordinator)
Head
Department of Mathematics
Mob.8788943894

3. Notice regarding the Introduction date of the course & BOS Resolution

Department of Mathematics

Kisan Veer Mahavidyalaya, Wai

Date : 20/11/2021

Notice

All the students of B.Sc. III are hereby informed that "Certificate Course in Python" is going to start from 22/11/2021. This course is compulsory for B.Sc. III (Mathematics) Students.

Principal

J. S. SANSTHA'S KISAN VEER MAHAVIDYALAYA WAI Dist. Satara

Course Co-ordinator

Department of Mathematics

Janata Shikshan Sansth's

Kisan Veer Mahavidyalay, Wai

Department of Mathematics

Self Funded Certificate Course in Python

BOARD OF STUDIES MEETING PROCEEDING

Date: 29/10/2021

The first meeting of the BOS was called on dated 29th October 2021, at 2.30 P.M. at Kisan Veer Mahavidyalaya, Wai.

Present Member:

Sr. No.	Name	Designation	Sign
1	Dr. S. R. Tate	Head, Department of Mathematics	
2	Mrs. V. A. Sawant	Assistant Professor	
3	Mr. S. S. Nalavade	Expert, Head,Department of Mathematics, Y. C. I. S, Satara	
4	Mrs. S. A. Patil	Expert, Patil Academy, Satara	

Following subjects were discussed in the meeting.

1) Formulation of syllabus for Certificate Course in Python.
2) Aims and objectives of the course were designed and framed.
3) Accordingly, the papers, topics and sub topics were designed as per the need of the course.
4) It has been decided that the last year B.Sc. Part III Mathematics Student's are eligible for this course.
5) Since there was no matter for discussion, the meeting was concluded.

4. Syllabus

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Department of Mathematics

CERTIFICATE COURSE IN PYTHON

SYLLABUS

1) **Introduction to Python:**
   Python Identifiers and Keywords, data types, simple mathematical operation, Indentation and Comments. Input and Output, First Python program
2) **Expression and operators:**
   Expression, Boolean expression, logical operations: comparison operator, membership operator, identity operator, bitwise operator. Order of evaluation. File Handling: open, read, write, append modes of file.
3) **Conditional Statements:**
   if-else, nested if-else, if-elif-else, try-except block.
4) **Looping Statements, Control statements:**
   Looping Statements: for loop, while loop, Nested loops, Control Statements: break, continue and pass.
5) **Functions:**
   Built-in functions, User-defined functions, Arguments, recursive function, Python Anonymous/Lambda Function, Global, Local and Nonlocal variables and return statement.
6) **Modules and packages in Python:**
   Modules, import, import with renaming, from-import statement, math module, cmath module, random module, packages.
7) **Python Data structure:**
   Strings, list, tulpes, dictionary, set and array.
8) **Operations on set and array:**
   Set operations, Intersection, union, difference, symmetric difference, searching and sorting.
9) **Data visualization in Python:** 2D and 3D plot in python: line plot, bar plot, histogram plot, scatter plot, pie plot, area plot, Mandelbrot fractal set visualization.

J.S. SANSTHA'S KISAN VEER MAHAVIDYALAYA WAI Dist. Satara

Practical Programs:

1) Program to Display "Hello Python" on Screen
2) Program to create file
3) Program to find greater number between two numbers
4) Program to find greater and equal number between two numbers
5) Program to find the number is Positive or Negative
6) Program to calculate the class obtained by the student.
7) Program to calculate the maximum between three numbers.
8) Program to determine whether the given integer is odd or even.
9) Program to find sum of first n integers
10) Program to find factorial of n
11) Program to check whether a given number is prime or not.
12) Program to find factorial of n using Recursive Function
13) Program to check whether the given numbers are relatively prime or not.
14) Program to verify Euler's formula using Python.
15) Program to check palindrome string.(A palindrome string is one that reads the same backward as well as forward.)
16) Program to remove duplicates from a list
17) Program to add an element in the set.
18) Program to remove elements in the set.
19) Program to solving systems of linear equations using Gauss Elimination Method
20) Program to solving systems of linear equations using LU Decomposition method
21) Program to find root of an equation using Bisection Method
22) Program to find root of an equation using Newton–Raphson formula
23) Program to solving ordinary differential equations (ODEs) with a given initial value using Euler Method
24) Program to find the approximate solution of ordinary differential equations (ODEs) with a given initial value using Runge-Kutta 4th Order Method.
25) Plotting 2D, 3D graphs.

Evaluation: Practical Work (40) + Viva Voce (10).

5. Course Objectives and Outcomes

Course Objectives:

- To understand the basic concept of programming using Python
- To create an awareness of the importance of Python in Computer Programming
- To learn how to read and write files in Python
- To develop the ability to write the program for the problem related their subjects

Course Outcomes:

At the end of this course, the students will be able to

- Explain basic principles of Python programming language
- Develop logical thinking
- Ability to write programs related to mathematics

Kisan Veer Mahavidyalaya, Wai

6. List of enrolled students

Janata Shikshan Sansth's

Kisan Veer Mahavidyalaya, Wai

Department of Mathematics

CERTIFICATE COURSE IN PYTHON

STUDENT LIST (2021-22)

SR. NO.	ROLL NO.	NAME
1	6	PETKAR DIVYA SANTOSH
2	36	CHORAGE PRAJAKTA PRAKASH
3	80	DHANAWADE SHRADDHA SANTOSH
4	101	BHOSALE KAIVALYA SANTOSH
5	114	BHOSALE RUTUJA DHANAJI

Co-ordinator

Head, Department of Mathematics

Kisan Veer Mahavidyalaya, Wai

7. Time Table

Janata Shikshan Sansth's

Kisan Veer Mahavidyalaya, Wai

Department of Mathematics

CERTIFICATE COURSE IN PYTHON

TIME TABLE (2021-22)

Time	Friday	Saturday
11:00 am – 12:00 pm	Theory (VAS)	Theory (VAS)
12:00 pm – 2: 00 pm	Practical (SRT)	Practical (SRT)

Note Attendance of student is compulsory

Principal

Course Co-ordinator

Department of Mathematics

Janata Shikshan Sanstha's

KISAN VEER MAHAVIDYALAYA, WAI

DEPARTMENT OF MATHEMATICS

CERTIFICATE COURSE IN PYTHON

2020-21

ATTENDENCE (THEORY)

Class: B.Sc.III

Month:

Sr. No.	Roll No	Name	22/11/2021	26/11/2021	27/11/2021	3/12/21	5/12/21	10/12/21	11/12/21	17/12/21
1	6	PETKAR DIVYA SANTOSH	P	P	P	P	P	P	P	P
2	36	PRAJAKTA PRAKASH CHORAGE	P	P	P	P	P	P	P	P
3	80	DHANAWADE SHRADDHA SANTOSH	A	A	A	A	A	A	A	A
4	101	KAIVALYA SANTOSH BHOSALE	P	P	P	P	P	P	P	P
5	114	BHOSALE RUTUJA DHANAJI								

ATTENDENCE (PRACTICAL)

Class: B.Sc.III

Month:

Sr. No.	Roll No	Name	22/11/2021	26/11/2021	27/11/2021	3/12/21	5/12/21	10/12/21	11/12/21	17/12/21
1	6	PETKAR DIVYA SANTOSH	P	P	P	P	P	P	P	P
2	36	PRAJAKTA PRAKASH CHORAGE	P	P	P	P	P	P	P	P
3	80	DHANAWADE SHRADDHA SANTOSH	A	A	A	A	A	A	A	A
4	101	KAIVALYA SANTOSH BHOSALE	P	P	P	P	P	P	P	P
5	114	BHOSALE RUTUJA DHANAJI								

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Wai - 412803

8. Attendent Sheets:

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DEPARTMENT OF MATHEMATICS

CERTIFICATE COURSE IN PYTHON

2020-21

ATTENDENCE (THEORY)

Class: B.Sc.III Month:

Sr. No.	Roll No	Name	18/12/21	24/12/21	31/12/21	1/1/22	7/1/22	8/1/22	11/3/22	12/3/22
1	6	PETKAR DIVYA SANTOSH	P	P	P	P	P	P	P	P
2	36	PRAJAKTA PRAKASH CHORAGE	P	P	P	P	P	P	P	P
3	80	DHANAWADE SHRADDHA SANTOSH	A	A	A	A	A	A	A	A
4	101	KAIVALYA SANTOSH BHOSALE	P	P	P	P	P	P	P	P
5	114	BHOSALE RUTUJA DHANAJI								

ATTENDENCE (PRACTICAL)

Class: B.Sc.III Month:

Sr. No.	Roll No	Name	18/12/21	24/12/21	31/12/21	1/1/22	7/1/22	8/1/22	11/3/22	12/3/22
1	6	PETKAR DIVYA SANTOSH	P	P	P	P	P	P	P	P
2	36	PRAJAKTA PRAKASH CHORAGE	P	P	P	P	P	P	P	P
3	80	DHANAWADE SHRADDHA SANTOSH	A	A	A	A	A	A	A	A
4	101	KAIVALYA SANTOSH BHOSALE	P	P	P	P	P	P	P	P
5	114	BHOSALE RUTUJA DHANAJI								

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Janata Shikshan Sanstha's

KISAN VEER MAHAVIDYALAYA, WAI

DEPARTMENT OF MATHEMATICS

CERTIFICATE COURSE IN PYTHON

2020-21

ATTENDENCE (THEORY)

Class: B.Sc.III

Month:

Sr. No.	Roll No	Name	19/3/22	19/3/22	25/3/22	26/3/22	1/4/22	8/4/22	9/4/22	16/4/22
1	6	PETKAR DIVYA SANTOSH	P	P	P	P	P	P	P	P
2	36	PRAJAKTA PRAKASH CHORAGE	P	P	P	P	P	P	P	P
3	80	DHANAWADE SHRADDHA SANTOSH	P	P	P	P	P	P	P	P
4	101	KAIVALYA SANTOSH BHOSALE	P	P	P	P	P	P	P	P
5	114	BHOSALE RUTUJA DHANAJI								

ATTENDENCE (PRACTICAL)

Class: B.Sc.III

Month:

Sr. No.	Roll No	Name	19/3/22	19/3/22	25/3/22	26/3/22	1/4/22	8/4/22	9/4/22	16/4/22
1	6	PETKAR DIVYA SANTOSH	P	P	P	P	P	P	P	P
2	36	PRAJAKTA PRAKASH CHORAGE	P	P	P	P	P	P	P	P
3	80	DHANAWADE SHRADDHA SANTOSH	P	P	P	P	P	P	P	P
4	101	KAIVALYA SANTOSH BHOSALE	P	P	P	P	P	P	P	P
5	114	BHOSALE RUTUJA DHANAJI								

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Janata Shikshan Sanstha's

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DEPARTMENT OF MATHEMATICS

CERTIFICATE COURSE IN PYTHON

2020-21

ATTENDENCE (THEORY)

Class: B.Sc.III Month:

Sr. No.	Roll No	Name	22/4/22	23/4/22	29/4/22	30/4/22	6/5/22	7/5/22	13/5/22	14/5/22
1	6	PETKAR DIVYA SANTOSH	P	P	P	P	P	P	P	P
2	36	PRAJAKTA PRAKASH CHORAGE	P	P	P	P	P	P	P	P
3	80	DHANAWADE SHRADDHA SANTOSH	A	A	A	A	A	A	A	A
4	101	KAIVALYA SANTOSH BHOSALE	P	P	P	P	P	P	P	P
5	114	BHOSALE RUTUJA DHANAJI								

ATTENDENCE (PRACTICAL)

Class: B.Sc.III Month:

Sr. No.	Roll No	Name	22/4/22	23/4/22	29/4/22	30/4/22	6/5/22	7/5/22	13/5/22	14/5/22
1	6	PETKAR DIVYA SANTOSH	P	P	P	P	P	P	P	P
2	36	PRAJAKTA PRAKASH CHORAGE	P	P	P	P	P	P	P	P
3	80	DHANAWADE SHRADDHA SANTOSH	A	A	A	A	A	A	A	A
4	101	KAIVALYA SANTOSH BHOSALE	P	P	P	P	P	P	P	P
5	114	BHOSALE RUTUJA DHANAJI								

Head
Department of Mathematics
Kisan Veer Mahavidyalaya
Wai - 412803

9. Result of the Course:

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Kisan Veer Mahavidyalaya Wai

Department of Mathematics

Examination: Certificate Course in Python (2021-22)

Marksheet

Time: 11:00 to 2:00 **Date: 08/06/2022**

Sr. No	Roll No.	Name of the Student	Marks (50)
1	6	PETKAR DIVYA SANTOSH	44
2	36	CHORAGE PRAJAKTA PRAKASH	48
3	80	DHANAWADE SHRADDHA SANTOSH	45
4	101	BHOSALE KAIVALYA SANTOSH	36
5	114	BHOSALE RUTUJA DHANAJI	AB

Head
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Kisan Veer Mahavidyalaya
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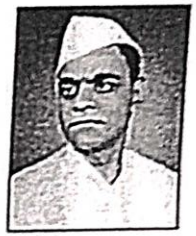
Janata Shikshan Sanstha's

Kisan Veer Mahavidyalaya, Wai

Department of Mathematics



This is to certify that **Miss. Dhanawade Shraddha Santosh** studying in B. Sc. III (Mathematics) has completed successfully **Certificate Course in Python** conducted by the Department of Mathematics, Kisan Veer Mahavidyalaya, Wai during the Academic year 2021-22 and obtained Grade "A".

Date: 08/06/2022

Co-ordinator
Head, Department of Mathematics
Kisan Veer Mahavidyalaya, Wai

Principal
Kisan Veer Mahavidyalaya, Wai

10. One Sample Certificate of the pass