Hindi Vidya Prachar Samiti's
RAMNIRANJAN JHUNJHUNWALA COLLEGE (AUTONOMOUS)
(Also known as R. J. College of Arts, Science \& Commerce as per UGC Notification)
Affiliated to UNIVERSITY OF MUMBAI II Recognized by UGC under 2f \& 12B NAAC Accredited 'A GRADE' with CGPA 3.50

## Knowledge is all Ambrosia



## CERTIFICATE COURSE IN BASICS OF PYTHON PROGRAMING

Hindi Vidya Prachar Samiti was incepted on the auspicious day of Shri Krishna Janmashtami, 15th August 1938. A brain child of a visionary Late Shri Nandkishore Singh Jairamji, samiti was established with the objectives of catering to the educational needs of the Hindi speaking community. Ramniranjan Jhunjhunwala College came into existence in 1963, enabling a larger section of the society to take advantage of the facilities provided for higher education.
From 1999-2000 the College has added a number of self-financing courses like B.M.S., B.B.I., B.Sc. in Computer Science, Information Technology, Biotechnology, M.Sc. in Computer Science, Biotechnology and Information Technology as well as add on courses, which further hone the special skills of the students.
The college has been reaccredited with ' A ' Grade by NAAC in 2014 with a CGPA 3.50 and received the Best College Award (2007-2008) of the University of Mumbai. The College has been bestowed with IMC "Ramkrishna Bajaj Performance Excellence Trophy", 2010.
The Former Principal of the college was awarded "Best Teacher" by Government of Maharashtra in 2011.
Government of Maharashtra conferred the college with "JAAGAR JAANIVANCHA" (First in Mumbai Suburban- in 2013 and Second in Mumbai Suburban- in 2014) for safety of girls.

## C

## D.sem 30 hours

 redits :- This Course will be introduced to enhance the
students' skills of Using Python software.
- From this course students will come to know
how to write a code, create games with python



Tic Tac Toe

| Unit | Objectives | Suggested <br> Activities | Duration | Mode of <br> Assessment |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | I | Familiarize students <br> with basic concepts and <br> programming skills | Lectures <br> Assignment <br> Library Work | 9 Hours | Quiz <br> Assignment <br> Mini Project |
|  | II | Introduce essential <br> logic concepts and | Lectures <br> Assignment <br> programming and | 9 Hours | Assignment <br> Mibrary Work Project |
| introduce the GUI mode |  |  |  |  |  |

## COURSE CONTENT

Unit
Functions: Decision Statements. Loop Control Statements. Functions
Strings Lists, Operations on Vectors, Implementation of vector class,
Linear Combination and average face value.

Unit
II Modules and Packages :Module. Package
GUI using Python : Tufte Module and TK interface
Scientific Python. Introduction to Pandas and data frame : NumPy Basics:
Arrays and Vectorized. Computation. Getting Started with pandas
Unit
III
Data Analysis Python : Data Loading. Storage. and File Formats Data

Introductions to python Programming: Introduction, Operators and expressions.
Linear Combination and average face value.

Tuples and Dictionaries: Tuples, Dictionaries

Wrangling: Oean, Transform, Merge, Reshape

Plotting and Visualization

| Evaluation | Maximum | Minimum Marks |
| :---: | :---: | :---: | :---: |
| Criteria | Marks | to be Scored |

## MEDIUM OF INSTRUCTION Engish

## 50 MARKS <br> PASSING 20

