

2021-2022



ST. JOSEPH'S DEGREE COLLEGE
SUNKESULA ROAD
KURNOOL

CERTIFICATE COURSE
ON
PYTHON LANGUAGE
ACADEMIC YEAR
2021-2022

Course Co-ordinators:

Mrs.S.Latha Rani

Mr. K.S.Nanda Kishore

Mr. P.Sai Srujana

Mr.J.Ramesh

Mrs.B.Manju Bhargavi

Request Letter

25-10-2021,
Kurnool

To
The Chairman,
Internal Quality Assurance Cell,
St.Joseph's Degree College,
Kurnool.

Respected Sir/Madam,

Sub: Request for permission to organize a Certificate course - "Python Programming Language"- Req. reg.

This is a proposal to organize a Certificate Course on "Python Programming Course". Python is a powerful general-purpose programming language. It is used in web development, data science, creating software prototypes, and so on.

So I request to consider the proposal and permit Computer Science department to conduct this Certificate Course to all our St.Joseph's Degree College students.

The resource person details for this FDP : Nagaraju Mamillapally, M.Sc, M.Tech

With Regards,
S.Latha Rani
Head, Computer Science Department.

Copy to:

1. Copy to Principal



St. Joseph's Degree College

Sunkesula Road, Kurnool-518004, AP

26-10-2021

Kurnool

Circular

This is to inform that the Department to Computer Science is conducting “A Certification Course on Python Language” for the benefits of **B.Sc., & B.Com V Semester** students. In this part of training course the students will learn and develop projects using Python Software. The course will focus on Python Basics and Machine Learning and how to achieve the results with Python. It is expected that the students will gain knowledge to do their academic project using python coding.

We are going to assign mentors for student project batches and guide them.

Interested students can enroll their names with following Course Co-coordinators before 31st October, 2021.

For B.Sc. (Maths) Groups:

Mr. K.S.Nanda Kishore

Mr. P.Sai Srujana

For B.Com (CA) Groups:

Mr.J.Ramesh

Mrs.B.Manju Bhargavi

The classes will be held daily in the afternoon from 3 PM to 5 PM.

PRINCIPAL

Copy to:

1. Copy to Principal
2. Copy to SJQAC Co-ordinator
3. Copy to Head, Department of Computer Science
4. Copy for Circulation/Notice Board

Write - Up

Objectives of Course

- Participants will be able to understand and use python language basics and libraries as a tool for data analytics
- Participants will be able to create Python codes and shall be able to complete projects for academic purpose
- Participants will be able to learn Machine Learning Concepts using python

About Course

A “**Certificate Course on Python Language**” was conducted by the Department of Computer Science, St. Joseph’s Degree College, Kurnool in the year 2020- 2021. One of the top languages used for data science is Python. With its power and flexibility Python is highly sought after as a preferred tool by data scientists. The course aims to equip students with essential skills using Python. The course will focus on Python Basics and Machine Learning and how to achieve the results with Python. It is expected that the students will gain knowledge to do their academic project using python coding.

The resource person for the program is **Sri M.Nagaraju, Hyderabad.**

It was an Online Faculty Development Program attended by computer faculty members and research scholars as well as students of engineering of various colleges from other states. It was over all a fruitful event and participants were expressing satisfaction.

We hope really this program give some confident to get the knowledge about Cloud Computing Technology and to speeding up their skills and capabilities in this field will get them market ready and opens up more career opportunities and ideas for start-ups.

Syllabus for Python Language:

Machine Learning & Neural Networks using Python Contents of this course

1. Introduction to python

Getting Started
Installing Python
Pip – python package manager
Setting up virtual environment
Setting up Jupyter Notebook / ipython

1.2. Indentation

1.3. Datatypes
1.4. Basic i/o
1.5. Flow control statements and loops
1.6. Date
Time formatting
1.7. Mathematical operators
1.8. Boolean and bitwise operators
1.9. Sets

Dictionaries, Lists, Arrays, Enum, Variable Scope
File Handling, Some helpful python's inbuilt functions
Lambda functions, OOP in python,
Exercise Session-Problem solving using python

2. Socket programming using Python

3. Most used modules in python

Math - Numpy – N dimensional matrix operations
3.3. Matplotlib - Plotting and visualizing data
3.4. Scipy – Signal processing in python,
3.5. OpenCV – Open source Computer Vision library,
3.6. Pandas – handling non-numeric data
3.7. PIL - python image library
3.8. Exercise Session

4. Introduction to linear algebra

Row Space & Column Space,
Time and Space complexity of matrix operations
4.3. Matrix Factorizations,
4.4. Symmetric, Orthogonal & Orthonormal matrices
4.5. Eigen Values & Eigen Vectors,
4.6. Positive definite & Semi-positive definite matrices
4.7. SVD-Singular Value Decomposition,
4.8. Graham Smidt decomposition

5. Machine learning

Different kinds of ML techniques
5.2. Knowing your data,
5.3. Filtering the noise
5.4. Feature extraction,
5.5. Creating a Machine learning model / Optimization problem
5.6. Fitting/training the model
Prediction based on the learning model
Creating a classification model using Scikit Learn

6. Neural Networks

Introduction to neuron
Similarities and differences between ML & NN
6.3. Activation Functions
Input, output and hidden layers
PCA – Principal component analysis
6.6. Types of neural networks
6.7. Creating our own NN using TensorFlow and Keras
6.8. Speeding up the training process using TensorFlow-gpu

Attendance sheets of B.Sc & B.com Students

Google Link:

[https://drive.google.com/file/d/1unbsk9LGp8k9Oyo_Xs4yztRwG3DdrmB6/view?usp=share link](https://drive.google.com/file/d/1unbsk9LGp8k9Oyo_Xs4yztRwG3DdrmB6/view?usp=share_link)

Google Form Registration Link:

To register, Kindly visit the link below:-

<https://forms.gle/B9sBPWSkDBWsV4aBA>

Total Sessions – 21

Target Participants:

- Students of B.Sc and B.Com V Sem Students
- Total No. of Participants : **227 students**

The screenshot displays the Google Forms interface for a form titled "Python Course Registration". The "Responses" tab is active, showing a total of 227 responses. Below the response count, there are three tabs: "Summary", "Question", and "Individual". The "Who has responded?" section is visible, listing the following email addresses: revallaswapna24@gmail.com, bfarook55@gmail.com, srijaans23@gmail.com, and grishmagrishu01@gmail.com. The interface also includes a "Send" button and a "Show all" button. The browser's address bar shows the URL: docs.google.com/forms/d/1-c008cGuWkMxZxOoF4UxpYRyWvA6PZyT6g6V2NRl_n/edit#responses.

Duration:

The Course was conducted from 01-11-2021 to 03-12-2021.

E-Certificate Issued for the Participants:



Feedback form:

Feedback Link: <https://forms.gle/v6vaPGQJRR1jkq8Z9>

Feedback form on Python Language

Questions Responses 81 Settings Total points: 0

Feedback form of Certification Course on Python conducted from 01 Nov, 2021 to 03 Dec, 2021

Dear Students,
Thank you for completing the Python Course successfully. Fill this feedback form to know your opinion about the course.

Email *

Valid email

This form is collecting emails. [Change settings](#)

Full Name(As needed in the Certificate) *

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Outcomes of the Course:

At the end of the course, the student will be able to Bloom's Level

1. Explain basic principles of Python programming language
2. Implement object oriented concepts
3. Implement database and GUI applications

Program Outcome of this course:

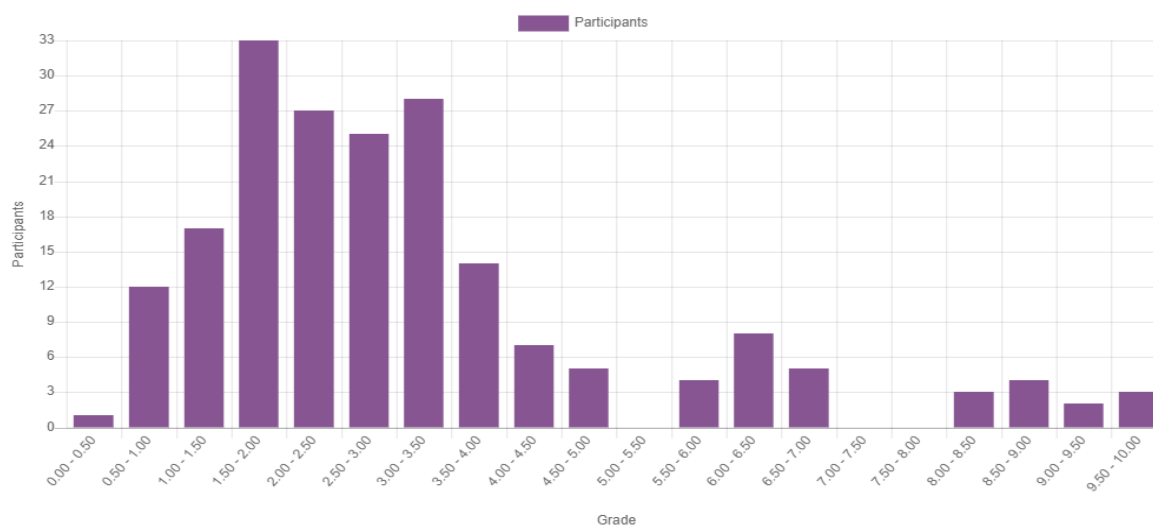
- 1.Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- 2.Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- 3.Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

DETAILS OF ONLINE EXAMINATION CONDUCTED IN PYTHON ON SCHEME OF VALUATION AND PATTERN OF QUESTION PAPER

ONLINE EXAMINATION				
Time: 1 Hrs	Max. Marks: 100		Min. Marks to pass :40	
S. No	Type of the Questions	No. of Questions	Marks per Question	Total Marks
1	Multiple Choice Questions	20	1	20

STUDENT'S PERFORMANCE GRAPH

Overall number of students achieving grade ranges



COURSE PHOTOS



PYTHON ONLINE EXAMINATION PHOTO

