



# Bharath

INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Declared as Deemed - to - be - University under section 3 of UGC Act 1956)



**BHARATH INSTITUTE OF SCIENCE AND TECHNOLOGY**

No.173, Agharam Road, Selalyur, Chennai , T.N - 600 073.

## Requisition Letter

From  
Dr. K.P.Kaliyamurthie,  
Professor & Head,  
Department of CSE,  
Bharath Institute of Higher Education and Research,  
Chennai

Date: 05.09.2021

To  
The Dean Engineering,  
Bharath Institute of Higher Education and Research,  
Chennai

Respected sir

Subject: Request of Permission to conduct a value added course on **“Introduction to Python Data Types”** -Reg

With reference to above subject, I would like to bring to your kind notice that, our department interested to organize value added course on **“Introduction to Python Data Types”** in our campus premises on **12/09/2021**.

55 students would be participating in this course. We request you kindly to give permission to organize this event.

Venue: **CSE Smart Room**

Timing : **9 am to 4.30 pm**

Submitted to Principal for approval to organize this value added course.

**HOD/CSE**

**DEAN ENGINEERING**

HEAD OF DEPARTMENT  
Department of Computer Sci & Engg.,  
Bharath Institute of Higher Education & Research  
(Declared as Deemed to be University U/S 3 of UGC Act, 1956)  
Chennai-600 073. INDIA



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## CIRCULAR

08.09.2021

The School of computing, Bharath Institute of Higher Education and Research is planned to conduct a certification value added course on Introduction to Python Data Types for the benefit of II, III and IV year students. This course is scheduled from 12.09.2021 for 30hours which includes theory and practical. The timings are 1:30 PM to 4:30 PM

All Registered Students must attend all the classes without fail. The following faculty members are assigned to handle the course. S.NO	Name of the Faculty	Designation
1	Dr.C.Nalini	Professor
2	Dr.G.Michael	Professor

**Head of Department**

To

Copy to CSE

Copy to IT

HEAD OF DEPARTMENT  
Department of Computer Science & Engg.,  
Bharath Institute of Higher Education & Research  
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## **CERTIFICATE COURSE ON INTRODUCTION TOPYTHON DATATYPES**

**Date of Introduction of the Course:12-09-2021**

### **COURSE SYLLABUS**

#### **1. Introduction to Python Syllabus**

An Introduction to The Python Programming Language. History of Python, Evolution Introduces Python's Basic Datatypes, Files, Functions, And Error Handling.

#### **2. Beginning Python Basics**

The Print Statement, Comments, Python Data Structures & Data Types, String operations in Python, Simple Input & Output, Simple Output Formatting, Operators in Python

#### **3. Variables in Python- Global and Static Variables**

Creating and Declaring Python Variable, Re-Declaring a Variable, Local variable, Global variable, Deleting a variable, Concatenating Variables, Constants

#### **4. Python Program Flow**

Indentation, The If statement and its' related statement, an example with it and its related statement, the while loop, the for loop, the range statement, Break & Continue, Assert Examples for looping

#### **5. Functions and Modules**

Create your own functions, Functions Parameters, Variable Arguments, Scope of a Function, Function Documentations, Lambda Functions& map, Exercise with functions Create a Module, Standard Modules.

#### **6. Python Data types**

Python Data Types: An Overview, Mutable Data Types, Immutable Data Types, Numbers, Strings, Lists, Tuples, Sets, Dictionaries.

#### **7. Python Numerical**

Categories of Number Data Type, Integers in Python, Long Integers, Octal and Hexadecimal in Python, Floating Point in Python, Complex Numbers in Python Number Type Conversion.

#### **8. Strings in Python**

Creating String in Python, Accessing Python String Characters, Updating and Deleting a String in Python, Python String Operators, Built-in Python String Methods and Python String Functions.

## 9. List in Python

Creating Lists in Python, Creating Multi-dimensional lists in Python, Python Lists Extension, Accessing Lists in Python.

## 10. Python List Comprehension

List Comprehension- Syntax, Condition, Expression, Nested Loop in List Comprehension.

## 11. Common List Operation in Python

Slicing Python Lists, Update or Add Elements in a Python List, Update or Add Elements in a Python, remove elements from list in python, remove duplicates from lists in python, Sorting Lists in Python, Reverse a List in Python.

## 12. Python Lists Functions and Methods

Predefined List Functions in List, Built-in Methods using List/Array.

## 13. Tuples in Python

Creating Tuple in Python, Accessing Python Tuple Elements – Indexing, Reverse Indexing, Slicing Operator, Operations in Python Tuples-Modifying Element in Python Tuple, Deleting Python Tuple Elements

## 14. Set in Python

Instantiate a set in Python, Python set Operation, Common Python Set Methods.

## 15. Dictionary in Python

Create a Dictionary in Python, Access Items in Dictionary, Operations in Dictionary, Common Python Dictionary methods.

## COURSE OBJECTIVES

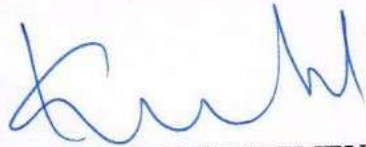
In this course we plan to give students an overview of basic concepts and terminology related to **Python and its Data Types**. This Python for beginners training course leads the students from the basics of writing and running Python scripts to more advanced features such as file operations, regular expressions, working with binary data, and using the extensive functionality of Python modules. Extra emphasis is placed on features unique to Python, such as tuples, array slices, and output formatting.

**Specifically, the course has the following objectives:**

### Students will learn

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

  
COURSE COORDINATOR

  
HEAD OF THE DEPARTMENT  
HEAD OF DEPARTMENT  
Department of Computer Science & Engg.  
Shorath Institute of Higher Education & Research  
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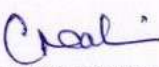
**CERTIFICATE COURSE ON INTRODUCTION TO PYTHON DATA TYPES**

**Date of Introduction of the Course:12-09-2021**

## Time Table& Lesson plan

<b>CLASS</b>	<b>DATE</b>	<b>TOPIC</b>
1,2	12-09-2021(AN)	<b>1.Introduction to Python Syllabus</b> An Introduction To The Python Programming Language. History Of Python, Evolution Introduces Python's Basic Datatypes, Files, Functions, And Error Handling.
3,4	16-09-2021(AN)	<b>2.Begining Python Basics</b> ThePrint Statement, Comments, Python Data Structures & Data Types,String Operations in Python, Simple Input & Output, Simple Output Formatting, Operators in Python
5,6	17-09-2021(FN)	<b>3. Variables in Python- Global And Static Variables</b> Creating and Declaring Python Variable, Re-Declaring a Variable, Local variable, Global variable, Deleting a variable, Concatenating Variables,Constants
7,8	17-09-2021(AN)	<b>4. Python Program Flow</b> Indentation, The If statement and its' related statement, An example with if and it's related statement, The while loop, The for loop,The range statement, Break &Continue, Assert Examples for looping
9,10	23-09-2021(AN)	<b>5. Functions and Modules</b> Create your own functions , Functions Parameters, Variable Arguments, Scope of a Function, Function Documentations, Lambda Functions& map, n Exercise with functions Create a Module, Standard Modules.
11,12	24-06-2021(FN)	<b>6. Python Data types</b> Python Data Types: An Overview, Mutable Data Types, Immutable Data Types, Numbers, Strings, Lists, Tuples, Sets, Dictionaries
13,14	24-09-2021(AN)	<b>7. Python Numericals</b> Categories of Number Data Type, Integers in Python, Long Integers, Octal and Hexadecimal in Python, Floating Point in Python, Complex Numbers in Python Number Type Conversion.

15,16	30-09-2021(AN)	<b>8. Strings in Python</b> Creating String in Python, Accessing Python String Characters, Updating and Deleting a String in Python, Python String Operators, Built-in Python String Methods and Python String Functions
17,18	01-10-2021(FN)	<b>9.List In Python</b> Creating Lists in Python , Creating Multi-dimensional lists in Python, Python Lists Extension, Accessing Lists in Python
19,20	01-10-2021 (AN)	<b>10.Python List Comprehension</b> List Comprehension- Syntax, Condition, Iterable, Expression , Nested Loop in List Comprehension
21,22	07-10-2021 (AN)	<b>11. Common List Operation in Python</b> Slicing Python Lists,Update or Add Elements in a Python List, Update or Add Elements in a Python, Remove elements from list in python,Remove duplicates from lists in python,Sorting Lists in Python, Reverse a List in Python .
23,24	08-10-2021 (FN)	<b>12. Python Lists Functions and Methods</b> Predefined List Functions in List, Built-in Methods using List/Array.
25,26	08-10-2021 (AN)	<b>13.Tuples in Python</b> Creating Tuple in Python, Accessing Python Tuple Elements – Indexing , Reverse Indexing, Slicing Operator, Operations in Python Tuples-Modifying Element in Python Tuple, Deleting Python Tuple Elements.
27,28	14-10-2021 (AN)	<b>14. Set In Python</b> Instantiate a set in Python, Python set Operation, Common Python Set Methods.
29,30	15-10-2021 (FN)	<b>15.Dictionary In Python</b> Create a Dictionary in Python, Access Items in Dictionary, Operations in Dictionary, Common Python Dictionary methods

  
COURSE COORDINATOR

  
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**CERTIFICATE COURSE ON INTRODUCTION TO PYTHON DATA TYPES**

**Date of Introduction of the Course: 12.09.2021**

## **School of Computing Registered Students Name List**

S.NO	REG.NO	NAME OF THE STUDENT
1	U14CS038	ANKAM MANJUNATH
2	U14CS007	ANKITA
3	U14CS015	BALA MURUGAN .P
4	U14CS026	CHIDIRALA.SAI SHANKAR
5	U14CS047	DEVULAPALLY NAGARAJU
6	U14CS054	GONTLA KARTHIK
7	U14CS231	GYANA PRASANNA
8	U14CS060	JASIMKHAN.J.
9	U14CS072	KATKURI.KUMAR
10	U14CS082	KRISHNANDAN YADAV
11	U14CS094	MANISH SHARMA
12	U14CS101	MOHAMMAD AADIL SHANHREYAR.
13	U14CS177	K.SIVA SUBRAMANIAN
14	U14CS703	VASANTHAN.N
15	U14CS120	NIRUPAMA CHAKRABORTY .S
16	U14CS129	PIYALI CHAKRABORTHY.M
17	U14CS138	RAHUL KUMAR
18	U14CS151	RAVIPATI SUBBARAYUDU
19	U14CS160	SANDEEP INGUVA
20	U14CS164	SAURAV KUMAR
21	U14CS708	SUSMITA MOG
22	U14CS172	SHASHI BHUSHAN BHAGAT
23	U14CS183	SULEKHA KUMARI
24	U14CS192	THARIGOPULA LOKESH
25	U14CS202	VEMULA ANWAR

26	U14CS210	YELLALA SANTHOSH REDDY
27	U14CS223	ARUN
28	U14CS236	M.RAVISANKAR
29	U15CS008	ARYAN SAHU
30	U15CS015	BANDARU RAMESH
31	U15CS020	BONALA SRIDHAR RAO
32	U15CS028	DADAM CHAITHRA
33	U15CS040	GANGARAPU UKESH
34	U15CS051	GUNDA VINAY KUMAR
35	U15CS058	JAICHAND KUMAR
36	U15CS068	KAIPU PRANAY REDDY
37	U15CS076	KANDULA SRINATH
38	U15CS085	KONDURU PREM KUMAR
39	U15CS096	M. DINESH REDDY
40	U15CS110	MANOJ KUMAR R
41	U15CS117	KARAM
42	U15CS704	N SWAPNA RAAGA
43	U15CS129	NEELA SAI KUMAR
44	U15CS138	PATNAM VENKATA RAMANA
45	U15CS150	PRATHI VENKAT RANJITH KUMAR
46	U15CS162	RAMIREDDY SURENDRA REDDY
47	U15CS176	SADHOLLA PRANAY REDDY
48	U15CS185	SANTHOSH RAJ M
49	U15CS189	SESHA SRUJAN.B
50	U15CS192	SIRI GIRI HAREESH
51	U15CS199	TAKKELLA AJITH CHOWDARY
52	U15CS209	VEMSETTY ARUN SAHADEV
53	U15CS216	KARAN PRINCY.P
54	U15CS233	SOMESH.C
55	U15CS248	PRAVEEN RAJ.V
55	U15CS701	ABHISHEK MANDURI

*Chal*  
COURSE COORDINATOR

*K. M. H.*  
HEAD OF THE DEPARTMENT

HEAD OF DEPARTMENT  
Department of Computer Science & Engg.,  
Charath Institute of Higher Education & Research  
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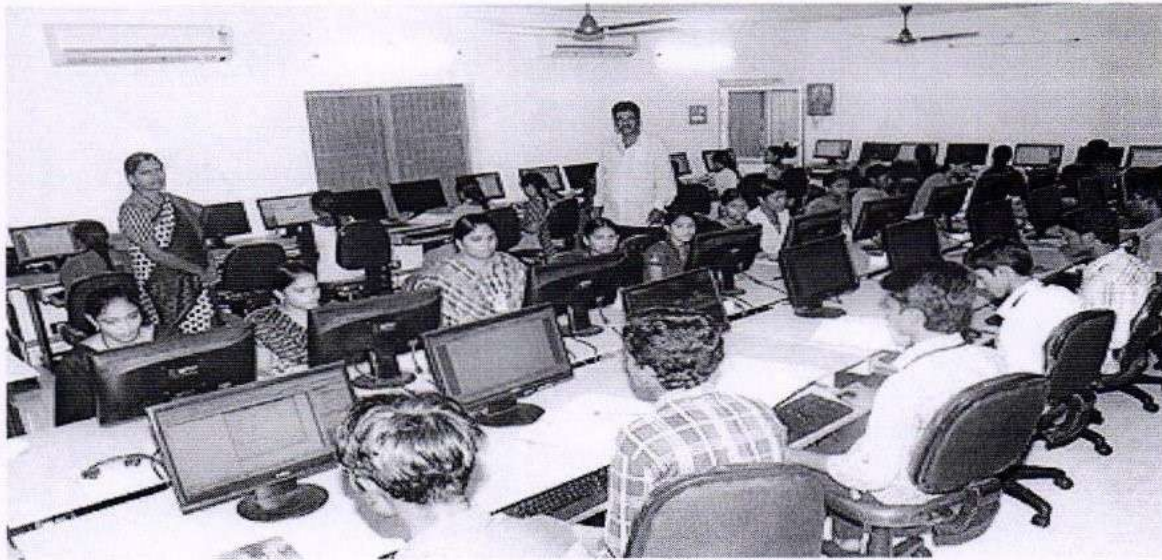


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## CERTIFICATE COURSE ON INTRODUCTION TO PYTHON DATATYPES



*Preal*

COURSE COORDINATOR

*[Handwritten Signature]*

HEAD OF THE DEPARTMENT

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Department of Computer Sci. & Engg.,  
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**CERTIFICATE OF PARTICIPATION**

**This certificate is presented to**

NEELA SAI KUMAR

For actively participating in the value added course "Introduction to Python Data Types"  
Conducted by School of Computing, BIHER from 12.09.2021 to 15.10.2021.

  
COURSE COORDINATORS

  
HEAD OF THE DEPARTMENT

  
DIRECTOR

# COURSE FEEDBACK FORM

Academic Year		2021-2022			
Term		Odd Sem			
Course Number					
Course Title		Python Data Types			
Number of Credits					
Type of Course	Regular		Elective		Add-on <input checked="" type="checkbox"/>

**I. Information on the Respondent: (Tick (✓) Appropriately)**

1. Percentage of classes attended									
0-20		20-40		40-60	<input checked="" type="checkbox"/>	60-80		80-100	

2. Number of hours per week spent on the course (Other than lecture hours)									
0-2		2-4		4-6	<input checked="" type="checkbox"/>	6-8		8-10	

3. Preparation for the course by the student:	
(i)	Have done part of this course earlier <span style="float: right;">yes</span>
(ii)	Has adequate prior exposure to the prerequisites <span style="float: right;">yes</span>
(iii)	Had to pickup relevant additional topics through concurrent study <span style="float: right;">yes</span>
(iv)	Have no exposure to the background material <span style="float: right;">yes</span>

4. The expectations for taking the course by the student are:	
(a)	Enhance by skill base in the area of specializations <span style="float: right;">yes</span>
(b)	Get exposed to a relevant subject <span style="float: right;">yes</span>
(c)	Curiosity <span style="float: right;">yes</span>
(d)	Better Employment Opportunity <span style="float: right;">yes</span>
(e)	Complete Course requirements <span style="float: right;">yes</span>
(f)	To Improve CGPA <span style="float: right;">yes</span>

**About the Instructor: Information on the Respondent: (Tick (✓) Appropriately)**

		A	B	C	D	E
1.	Pace of the Teaching/lecture			<input checked="" type="checkbox"/>		
2.	Comment of the Subject			<input checked="" type="checkbox"/>		
3.	Clarity of expression			<input checked="" type="checkbox"/>		
4.	Level of preparation			<input checked="" type="checkbox"/>		
5.	Level of interaction			<input checked="" type="checkbox"/>		
6.	Accessibility outside the class			<input checked="" type="checkbox"/>		
7.	Others (please specify)					

A: Excellent	B: Very Good	C: Good	<input checked="" type="checkbox"/> D: Satisfactory	E: Poor
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**HEAD OF THE DEPARTMENT**

# COURSE FEEDBACK FORM

Academic Year		2021-2022			
Term		Odd Sem			
Course Number					
Course Title		Introduction to Python Data Types			
Number of Credits					
Type of Course	Regular		Elective		Add-on <input checked="" type="checkbox"/>

**I. Information on the Respondent: (Tick (✓) Appropriately)**

**1. Percentage of classes attended**

0-20		20-40		40-60	✓	60-80		80-100	
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**2. Number of hours per week spent on the course (Other than lecture hours)**

0-2		2-4		4-6	✓	6-8		8-10	
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**3. Preparation for the course by the student:**

(i)	Have done part of this course earlier	yes
(ii)	Has adequate prior exposure to the prerequisites	yes
(iii)	Had to pickup relevant additional topics through concurrent study	yes
(iv)	Have no exposure to the background material	yes

**4. The expectations for taking the course by the student are:**

(a)	Enhance by skill base in the area of specializations	yes
(b)	Get exposed to a relevant subject	yes
(c)	Curiosity	yes
(d)	Better Employment Opportunity	yes
(e)	Complete Course requirements	yes
(f)	To Improve CGPA	yes

**About the Instructor: Information on the Respondent: (Tick (✓) Appropriately)**

		A	B	C	D	E
1.	Pace of the Teaching/lecture			✓		
2.	Comment of the Subject			✓		
3.	Clarity of expression			✓		
4.	Level of preparation			✓		
5.	Level of interaction			✓		
6.	Accessibility outside the class			✓		
7.	Others (please specify)			✓		

A: Excellent		B: Very Good		C: Good	✓	D: Satisfactory		E: Poor	
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