



# VALUE ADDED COURSE

## PYTHON PROGRAMMING

Department of Computer Science , I.T and  
Computer Applications

Starts from  
*December 2021 - May 2022*

- Live Projects
- Extended Lab Support
- Hands on-training



II Year B.Sc Computer Science, B.Sc Information Technology  
and  
Bachelor of Computer Applications



Inlustro Training Pvt Ltd.,  
[www.inlustro.net](http://www.inlustro.net)  
Mail : [support@inlustro.net](mailto:support@inlustro.net)



Shrimati Indira Gandhi College  
website : <https://www.sigc.edu/>  
Mail : [Contact@sigc.edu](mailto:Contact@sigc.edu)

# INLUSTRO LEARNING PRIVATE LIMITED

## INTRODUCTION TO PYTHON PROGRAMMING

### SRIMATHI INDIRA GANDHI COLLEGE OF WOMEN

#### SYLLABUS

(Effective from the year 2021-2022)

Code: 21IL/MC/PY14

LTP : 4 1 0

TOTAL TEACHING HOURS : 50

TOTAL PROJECT HOURS : 15

#### OBJECTIVES OF THE COURSE

To introduce the students basic concepts of Python, Pandas & Data Visualization

- To enable the students to write simple Python programs
- To have a strong foundation for various applications of Python like Data Science, Machine Learning and Artificial Intelligence
- To induce strong programming concepts and enable the students to face technical interviews.

#### UNIT 1 INTRODUCTION, STRINGS (10 hrs)

- 1.1 Introduction, Setting up Python, Your first Python Program
- 1.2 String & String Methods

#### UNIT 2 NUMBERS & MATH, CONDITIONALS (10 hrs)

- 2.1 Numbers and Math : Order of Operations, Built in functions for working with numbers
- 2.2 Conditional Logic & Control Flow

#### UNIT 3 LISTS, TUPLES (10 hrs)

- 3.1 Lists
- 3.2 Tuples

#### UNIT 4 DICTIONARIES, FUNCTIONS (10 hrs)

- 4.1 Dictionaries
- 4.2 Functions

## UNIT 5 CODE BUGS, ARRAYS & MATRICES

(10 hrs)

- 5.1 Code Bugs
- 5.2 Arrays & Matrices

### COURSE LEARNING OUTCOMES

On successful completion of the course, the students will be able to

- Develop a strong competency in the language.
- Analyze the given data and apply Python Programming to provide meaningful results
- Apply the skills of Python in the fields of Data Science, Machine Learning and Artificial Intelligence
- Cracking the programming interview in any Product/Service based firm.

### BOOKS FOR STUDY

1. Dr. R. Nageswara Rao . Core Python Programming. Dreamtech press
2. Real Python, A Practical Introduction to Python 3
3. Allen Downey, Jeff Elkner, and Chris Meyers. 'Learning with Python'. Free downloadable e book <https://hackr.io/blog/best-python-books-for-beginners-and-advanced-programmers>
4. C.H. Swaroop 'A Byte of Python'. Free downloadable e book <https://python.swaroopch.com/>

### BOOKS FOR REFERENCE

1. Automate the Boring Stuff with Python, 2nd Edition: Practical Programming for Total Beginners
2. Daniel Y Chen. Pandas for Everyone. Pearson Addison Wesley

### WEB RESOURCES

[www.kaggle.com/courses](http://www.kaggle.com/courses), <https://realpython.com>, <https://www.w3resource.com>,  
<https://stackoverflow.com>, <https://medium.com>

### PATTERN OF ASSESSMENT

**Continuous Assessment Components: Total Marks: 70**

Test - 30

Assignment - 40

**End Semester Exam : Total Marks: 30**



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**Curriculum**

**Python  
Programming**

**Second Semester**

**Academic Year  
2021 - 2022**

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# PYTHON PROGRAMMING

## SYLLABUS

### OBJECTIVES OF THE COURSE

- To introduce the student to basic concepts of Python, Pandas & Data Visualization.
- To enable the students to write simple Python programs.
- To have a strong foundation for various applications of Python like Data Science, Machine Learning, and Artificial Intelligence.
- To induce strong programming concepts and enable the students to face technical interviews.

### UNIT 1: INTRODUCTION, STRINGS, NUMBERS & MATH

- Introduction, Setting up Python, Your first Python Program
- String & String Methods
- Numbers and Math : Order of Operations, Built-in functions for working with numbers

### UNIT 2: FUNCTIONS & LOOPS, DEBUGGING, CONDITIONALS

- Functions and Loops
- Finding & Fixing Code bugs
- Conditional Logic & Control Flow
- Testing a function

### UNIT 3: TUPLES, LISTS, DICTIONARIES, OOP, MODULES

- Tuples, Lists & Dictionaries
- Object Oriented Programming
- Modules and Packages, Installing Packages with pip
- Testing a class

### UNIT 4: FILE I/O, PACKAGES, DATABASES

- File Input and Output
- Installing Packages with pip
- Working with Databases

### UNIT 5: WEB INTERACTION, SCIENTIFIC COMPUTING, GUI

- Interacting with the Web
- Scientific Computing

- 
- Graphical User Interfaces

### **COURSE LEARNING OUTCOMES**

- The students will be able to develop a strong competency in the language.
- The students will be capable of analyzing the given data and applying Python Programming to provide meaningful results.
- The students can apply the skills of Python in the fields of Data Science, Machine Learning, and Artificial Intelligence.
- The students will be able to Crack the programming interview in any Product/Service based firm.

**Teacher:** Nalini Raj



Nalini Raj

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**Mark Sheet**

**Python  
Programming**

**Second Semester**

**Academic Year  
2021 - 2022**

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## INDEX

S.no	Year and Department	Page number
1	II BSc(CS)	1
2	II BCA	4
3	II BSc(IT)	6

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**II BSc(CS)**

SNO	NAME	MIDTERM	ASSIGNMENTS	FINAL EXAM	TOTAL MARKS	Attendance	GRADE	
1	ANANTHAVALLI A	18.91	22.40	6.3	47.61	6	C	Pass
2	ANANTHI A	26.74	32.00	12.9	71.64	7	A	High Honours
3	ANITHA S	25.43	20.80	12.3	58.53	5	B	Honours
4	ASHMITHA B	28.70	40.00	13.5	82.20	8	A	High Honours
5	BALASUGUNA S K	23.48	23.20	9.9	56.58	9	B	Honours
6	BHUVANESWARI B	27.39	40.00	8.1	75.49	5	A	High Honours
7	CELCY PRISEBA C	15.65	24.00	4.2	43.85	7	C	Pass
8	DEEBASHIKA P	18.26	32.00	6.6	56.86	8	B	Honours
9	DEVISRI P	27.39	40.00	8.4	75.79	6	A	High Honours
10	DHANA PRIYA S	28.70	40.00	10.5	79.20	9	A	High Honours
11	DHEVADHARSHINI D	27.39	40.00	6.3	73.69	10	A	High Honours
12	DHIVYA SHREE S	25.43	40.00	6.3	71.73	9	A	High Honours
13	DURGA S	26.09	40.00	3.6	69.69	9	B	Honours
14	FARGHANA A	26.74	30.40	12	69.14	10	B	Honours
15	Gayathri RASHIKA B	22.83	40.00	9.3	72.13	7	A	High Honours
16	HARINI D	5.87	32.00	8.1	45.97	10	C	Pass
17	HARINI G	29.35	24.00	2.1	55.45	10	B	Honours
18	HARINI SRI K	22.83	32.00	2.1	56.93	10	B	Honours
19	HARSHINI K	24.13	32.00	1.8	57.93	8	B	Honours
20	HEMA NANDHINI S	28.70	37.60	0	66.30	8	B	Honours
21	ISWARYA V	25.43	40.00	3	68.43	5	B	Honours
22	JANANI S	0.00	0.00	10.5	40.10	8	C	Pass
23	JASMIN J	29.35	40.00	4.2	73.55	7	A	High Honours
24	JERLIN A	27.39	40.00	8.4	75.79	7	A	High Honours
25	KANIMOZHI R	28.80	16.00	0	44.80	7	C	Pass
26	KAVIYA B	26.74	32.00	12.9	71.64	7	A	High Honours
27	KUNGUMA BRINDHA S	9.13	32.00	3.9	45.03	5	C	Pass
28	LATHA MALINI P	28.70	40.00	5.4	74.10	8	A	High Honours
29	LISHA DEVI S	29.35	32.00	6.6	67.95	10	B	Honours
30	MADHUBALA S	19.57	28.00	5.4	52.97	9	B	Honours

31	MALLIKA A	24.13	36.80	7.8	68.73	9	B	Honours
32	MANGALAGOWRI G	24.78	40.00	5.4	70.18	6	A	High Honours
33	MOHANA PRIYA M	23.48	33.60	5.1	62.18	9	B	Honours
34	MONISHA G	13.04	40.00	6	59.04	7	B	Honours
35	NAGADHARSHINI K	27.39	40.00	4.8	72.19	5	A	High Honours
36	NAGARANI R	22.83	40.00	2.7	65.53	9	B	Honours
37	NANDHINI A	28.70	32.00	4.5	65.20	9	B	Honours
38	NANDHINI R	27.39	40.00	4.2	71.59	9	A	High Honours
39	NASREEN BANU M	23.48	40.00	3.9	67.38	8	B	Honours
40	NAVANEETHA T	12.39	22.40	6.9	41.69	6	C	Pass
41	NIVETHA K	16.30	22.40	6	44.70	9	C	Pass
42	PANDIMEENA M	22.83	40.00	5.4	68.23	8	B	Honours
43	PATHMA M	26.74	25.60	6.6	58.94	10	B	Honours
44	PAVITHRA S	29.35	40.00	7.5	76.85	10	A	High Honours
45	PRAVEENA M	27.39	40.00	8.1	75.49	9	A	High Honours
46	PRIYA J	11.09	32.00	6.6	49.69	5	C	Pass
47	PRIYANGA D	24.13	40.00	5.4	69.53	8	B	Honours
48	RAMALAKSHMI P	29.35	32.00	6.6	67.95	10	B	Honours
49	ROSHINI C	28.04	32.00	4.2	64.24	5	B	Honours
50	ROSHNI R	26.74	40.00	16.5	83.24	7	A	High Honours
51	SAGAYA REEJO RANI T	25.43	40.00	3.9	69.33	5	B	Honours
52	SANGEETHA S	26.74	40.00	0	66.74	7	B	Honours
53	SASIKALA M	29.35	40.00	7.5	76.85	7	A	High Honours
54	SENTHURA DEVI S	24.13	32.00	4.5	60.63	6	B	Honours
55	SHANJANA S	22.83	40.00	5.4	68.23	9	B	Honours
56	SHANMUGAPRIYA S	11.74	40.00	6	57.74	9	B	Honours
57	SHARIN N	28.04	40.00	4.5	72.54	5	A	High Honours
58	SIVA SAKTHI M	20.87	40.00	5.1	65.97	7	B	Honours
59	SNEHA G	28.70	40.00	7.8	76.50	5	A	High Honours
60	SRIMATHI S	29.35	40.00	6.3	75.65	10	A	High Honours
61	SRINATHI B	29.35	40.00	3.6	72.95	5	A	High Honours
62	SUBHASHINI R	27.39	40.00	12	79.39	7	A	High Honours
63	SUVETHA C	27.39	40.00	8.7	76.09	10	A	High Honours

64	SWATHI S	0.00	0.00	1.8	40.10	7	C	Pass
65	URESHNATHIRUKKOVAI A	28.70	32.00	8.1	68.80	6	B	Honours
66	VANITHA R	30.00	40.00	8.4	78.40	5	A	High Honours
67	VIDHYASHREE R	26.74	40.00	6.6	73.34	6	A	High Honours
68	VINO U	25.43	40.00	4.5	69.93	7	B	Honours
69	VINOTHIYA M	30.00	40.00	8.4	78.40	7	A	High Honours

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**II BCA**

SNO	NAME	MIDTERM	ASSIGNMENTS	FINAL EXAM	TOTAL MARKS	Attendance	GRADE	
1	AARTHI V	29.35	39.20	3.6	72.15	7	A	High Honours
2	AKSHAYA B	20.87	32.00	1.5	54.37	8	B	Honours
3	ARTHI D	28.70	32.00	3.3	64.00	6	B	Honours
4	ATCHAYA M	28.70	31.20	2.1	62.00	9	B	Honours
5	BALA PREETHIKA N	28.70	32.00	6.6	67.30	7	B	Honours
6	DEEPIKA K	28.70	23.20	5.4	57.30	5	B	Honours
7	DHANYALAKSHMI P	11.74	24.80	5.1	41.64	8	C	Pass
8	DHARANI A	29.35	32.00	6.9	68.25	7	B	Honours
9	DHARANI R	29.35	40.00	1.8	71.15	7	A	High Honours
10	DHIVYA BHARATHI S	28.70	32.00	7.5	68.20	8	B	Honours
11	GNANAMANJARI K	27.39	16.00	5.7	49.09	7	C	Pass
12	HEMAREKA M J	13.70	27.20	2.1	43.00	9	C	Pass
13	JEBINA S	27.39	22.40	2.1	51.89	5	B	Honours
14	JENISHA J	28.04	29.60	2.1	59.74	7	B	Honours
15	KANMANI R	16.96	25.60	0.6	43.16	7	C	Pass
16	KAREESHMA E	23.48	16.00	2.4	41.88	6	C	Pass
17	KARUNYA IVANJALIN D	15.65	24.00	7.2	46.85	6	C	Pass
18	KAVIYA V	13.04	32.00	3	48.04	9	C	Pass
19	KEERTHI K	26.09	32.00	5.4	63.49	7	B	Honours
20	LAKSHANYA G	5.87	8.00	5.1	40.10	10	C	Pass
21	LATHA V	28.70	23.20	5.1	57.00	6	B	Honours
22	LEENASHRI P	22.17	32.00	0	54.17	8	B	Honours
23	MADHUMITHA M	6.52	31.20	5.4	43.12	10	C	Pass
24	MADHUMITHA S	6.52	28.80	5.7	41.02	9	C	Pass
25	MATHUMATHI R	18.26	32.00	4.8	55.06	8	B	Honours
26	MUTHA PATHMA PRIYANKA K	30.00	32.00	1.5	63.50	9	B	Honours
27	MUTHU VEGA R	0.00	0.00	0	0.00	0	D	TC
28	NAGARANI M	29.35	40.00	3	72.35	10	A	High Honours
29	NANDHANA P	29.35	40.00	2.4	71.75	7	A	High Honours
30	NISHANTHINI P	22.83	32.00	3.3	58.13	5	B	Honours

31	NITYASRE N	23.48	40.00	8.1	71.58	7	A	High Honours
32	NIVETHA A	23.48	16.00	3.9	43.38	9	C	Pass
33	PADMAVATHY J	6.52	32.00	3.3	41.82	8	C	Pass
34	PAVALA KUMARI S	17.61	32.00	6.9	56.51	7	B	Honours
35	PAVITHRA P	16.96	32.00	1.5	50.46	10	B	Honours
36	PRIYANKA D	29.35	32.00	4.2	65.55	8	B	Honours
37	RATCHAKA R	0.00	0.00	3.9	40.10	5	C	Pass
38	SANTHIYA S	25.43	32.00	9.3	66.73	6	B	Honours
39	SHALINI B	28.70	32.00	2.1	62.80	7	B	Honours
40	SHALINI G	6.52	28.00	7.5	42.02	9	C	Pass
41	SINDHUMATHI S	23.48	40.00	1.2	64.68	9	B	Honours
42	SNEKA SRI A K	22.83	16.00	4.2	43.03	8	C	Pass
43	SUBALEKA P	27.39	16.00	8.7	52.09	10	B	Honours
44	SUJITHA P	26.09	37.60	6.9	70.59	6	A	High Honours
45	SUSHMITHA R	23.48	32.00	2.1	57.58	6	B	Honours
46	VIJAYASHANTHI M	28.70	40.00	2.4	71.10	8	A	High Honours
47	VINISHA B	27.39	40.00	3.6	70.99	8	A	High Honours
48	YASMIN BEGUM M	12.39	32.00	8.1	52.49	10	B	Honours
49	YOGAPRIYA M	28.04	16.00	2.1	46.14	5	C	Pass

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II BSc(IT)								
SNO	NAME	MIDTERM	ASSIGNMENTS	FINAL EXAM	TOTAL MARKS	Attendance	GRADE	
1	AKILA SIVAGAMI.P	21.52	20.80	1.2	43.52	7	C	Pass
2	ARIFA.A	10.43	32.00	0	42.43	5	C	Pass
3	INDHUMATHI G.J	3.91	0.00	1.8	40.10	7	C	Pass
4	JAYASURYA.S	10.43	0.00	1.8	41.20	8	C	Pass
5	KAVIBALA.A	13.91	24.00	4.2	42.11	6	C	Pass
6	MAHAJOTHI.S	10.87	0.00	1.8	40.10	8	C	Pass
7	PREETHA.P	0.00	0.00	1.5	40.20	9	C	Pass
8	PRIYADHARSHINI.B	10.43	32.00	0.9	43.33	9	C	Pass
9	PRIYANKA.B	10.87	32.00	0.9	43.77	5	C	Pass
10	RAHIYANATH.T	6.52	32.00	1.5	40.02	9	C	Pass
11	RAJA SHREE.G	10.43	0.00	2.1	40.30	6	C	Pass
12	RIBHADHARSHINI	8.70	29.60	2.7	41.00	6	C	Pass
13	SOBIYA BANU.S	14.35	40.00	5.7	60.05	9	B	Honours
14	SUBASHRI.S	18.70	40.00	2.7	61.40	8	B	Honours
15	VISHNUPRIYA.R	7.83	31.20	1.2	40.23	10	C	Pass



Nalin Rj



# CERTIFICATE

## OF COMPLETION



This Certifies that

# Nityasre N

**II BCA** at **Shrimati Indira Gandhi College**, has successfully completed the **Python Programming** course (**January 2022** to **May 2022**) and has passed with **High Honours**

**Aditya Sambamoorthy**

Founder & CEO



**InLustro**