



**Shri Shivaji Education Society's
Board for Higher Education Vidyanagar Karad.**



YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF MATHEMATICS

SHORT TERM COURSE

Python Programming (CCF-21)

2023-24

Index

Total Students:12

Class: B.Sc III

Duration: 03 Months

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Principal
Yashwantrao Chavan College of Science
Karad

Estd. 1958

|| Be One with the downtrodden and the underprivileged ||

Shri Shivaji Education Society Karad, Board For Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, KARAD - 415 124 Dist. Satara (Maharashtra)

Hon. Yashwantrao Chavansaheb Founder
 02164 - 271356, 271357 e-mail : prinyccsk@gmail.com website : www.yccskarad.com
 UDISE Code - 27310207715 Index No. - J 21.02.002

Hon. P. D. Patilasaheb President up to 17th September 2008

Reaccredited B** Level by NAAC, Bangalore
 AN ISO 9001-2015 CERTIFIED COLLEGE REG. NO. : RQ91/5237

Dr. Suryakant Babu Kengar Principal

Hon. Shamrao Alias Balasaheb Pandurang Patil President, Shri Shivaji Education Society's, Board for Higher Education, Karad

Hon. Altafhusen Nasiruddin Mulla General Secretary, Shri Shivaji Education Society's, Board for Higher Education, Karad

Ref No. समस /2023-24

Date: 01/11/2023

Short Term Course in “**Mathematical Computation using Python**” is going to start in the Department of Mathematics, Yashwantrao Chavan College of Science, Karad. Following committee is constituted for syllabus framing of the said course.

Board of Studies (BOS) members

Sr. No.	Name	Designation	Member Category
1.	Ms.G.S.Burud	Assistant Professor and Head, Department of Mathematics, Yashwantrao Chavan College of Science, Karad	BOS Chairman
2.	Ms.D.B.Gavade	Assistant Professor, Department of Mathematics, Yashwantrao Chavan College of Science, Karad	Course Coordinator
3.	Dr. D.R. Phadatare	Head & Associate Professor, Department of Mathematics, Balasaheb Desai College, Patan.	External Expert


Co-ordinator,
 Internal Quality Assurance Cell (IQAC),
 Yashwantrao Chavan College
 of Science, Karad




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Dr. Suryakant Babu Kengar
Principal

Hon. Shamrao Alias Balasaheb Pandurang Patil
President, Shri Shivaji Education Society's, Board for Higher Education, Karad
MLA

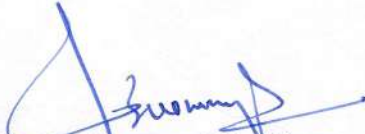
Hon. Altafhusen Nasiruddin Mulla
General Secretary, Shri Shivaji Education Society's, Board for Higher Education, Karad

Ref No. समस/2023-24

Date:-11/10/2023

To prepare the short-term course for B.Sc. III Mathematics, the following syllabus sub-committee is framed. Prepare the syllabus within one month and submit it to the Head, Department of Mathematics, Yashwantrao Chavan College of Science, Karad.

For B.Sc. III Mathematics Short Term Course		
Sr. No.	Name	Designation
1.	Ms.D.B. Gavade	Chairman
2.	Ms.G.S.Burud	Member


 Co-ordinator, IQAC
Co-ordinator,
 Internal Quality Assurance Cell (IQAC),
 Yashwantrao Chavan College
 of Science, Karad




 Principal
Principal
 Yashwantrao Chavan College of Science
 Karad

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, KARAD - 415 124 Dist. Satara (Maharashtra)

Hon. Yashwantrao Chavansaheb Founder
 02164 - 271356, 271357 e-mail : prinyccsk@gmail.com website : www.yccskarad.com
 UDISE Code - 27310207715 Index No. - J 21.02.002

Hon. P. D. Patilisaheb President up to 17th September 2008

Reaccredited B** Level by NAAC, Bangalore
 AN ISO 9001-2015 CERTIFIED COLLEGE REG. NO. : RQ91/5237

Dr. Suryakant Babu Kengar
Principal

Hon. Shamrao Alias Balasaheb Pandurang Patil
President, MLA
Shri Shivaji Education Society's, Board for Higher Education, Karad

Hon. Altafhusen Nasiruddin Mulla
General Secretary,
Shri Shivaji Education Society's, Board for Higher Education, Karad


YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD


Year 2023-24


Syllabus Approved Letter


The IQAC Committee has approved the syllabus of the short-term course to be conducted by the Department of Mathematics.

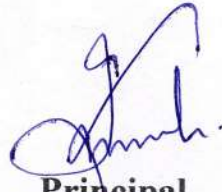
Sr. NO.	Name of The Course	Type of the Course
1.	Mathematical Computation Using Python	Short-term Course


MATHEMATICS
 Karad


Course co-Ordinator


IOAC Co-ordinator
 Internal Quality Assurance Cell (IQAC),
 Yashwantrao Chavan College
 of Science, Karad


HOD


Principal
Principal
 Yashwantrao Chavan College of Science
 Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Department of Mathematics

Syllabus - Short Term Course (B.Sc. III)

Implemented from the Academic Year 2023 – 24

Course title -Mathematical Computation Using Python

Preamble

Understanding of basics of python programming is important for the students of the mathematics. The department of mathematics has taken the initiative to add the short-term course. The Course is started with following objects and course outcomes.

Course Objectives

- To improve thinking ability critically, methodically, independently and draw a logical conclusion.
- Be able to do basic programming in python..

Course Outcomes

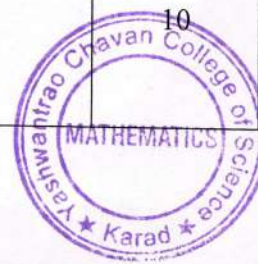
At the end of the course the students should be able to:

- To learn how to write loops, functions and decision statements in python
- To learn various Numerical methods, Algebraic equations programming in python
- To learn basics of Lists, Tuples and dictionaries in Python programs
- To learn various Numerical methods, Algebraic equations programming in python

Total Allotted lectures = 30 lectures of 60 minutes (30 Hours)

Syllabus

Unit No.	Title: Mathematical Computation Using Python	No. of Hours
Theory		
1	Introduction to Python: Introduction to Python, Anaconda, Spyder IDE, Python Identifiers and Keywords, data types, Introduction to mathematical operations, Expressions and Introduction to operators: identity, bitwise, comparison, File Handling: open, read, write, and append modes of file, Introduction to mathematical libraries (NumPy, SciPy, SymPy)	10
2	Numpy Baises Introduction to NumPy arrays Array creation and manipulation Array indexing and slicing Array operations (element-wise operations, matrix multiplication) Universal functions (ufuncs)	10



Lab Course		
1	Scientific Computing with Scipy Overview of SciPy library, Numerical integration and differentiation, Optimization with SciPy, Solving linear and nonlinear equations Statistical functions and distributions Symbolic Mathematics with SymPy Introduction to SymPy library, Symbolic expressions and symbols, Basic algebraic manipulations, Calculus operations (differentiation, integration, limits), Solving equations symbolically.	10

Reference Books :-

- "Python for Data Analysis" by Wes McKinney: This book covers data analysis techniques using Python, including NumPy, Pandas, and Matplotlib.
- "Numerical Python: A Practical Techniques Approach for Industry" by Robert Johansson: Provides a comprehensive introduction to numerical computing with Python using NumPy, SciPy, and Matplotlib.
- "SymPy: Symbolic Computing in Python" by Aaron Meurer et al.: Offers an in-depth exploration of symbolic mathematics using the SymPy library.




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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD
Department of Mathematics

Notice

Date: 01/11/2023

The Department of Mathematics is going to be offer a short-term course entitled "**Mathematical Computation using Python**" to B.Sc. III students. This course is helpful for understanding the python programming . Those candidates interested in this course should register their names with Ms.D.B.Gavade (Course Coordinator) on or before November 30, 2023.


Course Coordinator


HOD
Department of Mathematics
Yashwantrao Chavan College of Science
Karad




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Yashwantrao Chavan College of Science
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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Department of Mathematics

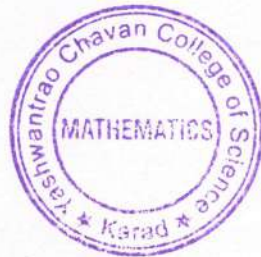
Short Term Course

Mathematical Computation Using Python

Year 2023-24

Name of the Enrolled Students

Roll No.	Name of Student
3147	Chavan Sneha Ravindra
3148	Nangare Sneha Devdas
3150	Yadav Vivek Balaso
3151	Dhumal Anuradha Shivajirao
3152	Kothavale Gauree Mahadev
3153	Dabane Prajkta krishnat
3154	Pathan Ayesha Asif
3155	Jadhav Swagata Sanjay
3156	Kadam Prajakta Prakash
3157	Tale Akaram Anna
3158	Galave Samadhan Jaywant
3159	Chalake Akanksha Arun



A handwritten signature in blue ink, appearing to be "S. S. Chavan".

Principal
Yashwantrao Chavan College of Science
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Department of Mathematics

Short Term Course

“Mathematical Computation Using Python” Year 2023-24

Theory & Practical Time Table

Dec. 2023 to Jan.2024

All the registered students of the short-term course “**Mathematical Computation Using Python**” are informed that the course will start on December 1, 2023. , Miss. Burud. G.S, Miss. Gavade. D.B will conduct practical and theory sessions. All should note and follow.

Theory Time Table

Lecture time	Friday	Saturday
9.15 – 10.15	GSB	DBG

Practical Time Table (Last week of every month)

Practical Time	Friday	Saturday
8.15 – 10.15	GSB	DBG

Where,

GSB- Miss. Burud. G.S

DBG-Miss.Gavade.D.B



DBG
Course Coordinator

[Signature]
Principal

Yashwantrao Chavan College of Science
Karad

[Signature]
HOD

Department of Mathematics
Yashwantrao Chavan College of Science
Karad

Yashwantrao Chavan College of Science, Karad
Department of Mathematics
Short term Course - Mathematical Computation Using Python
Mid Exam (2023-24)

Date- 16/01/2024

Time-9:30 AM-10:30AM

Marks-30 Marks

Instructions:

- 1) All questions are compulsory.
- 2) Each question carry 2 marks.

Q. Choose the correct Alternatives.

1. Who developed the Python language?
(a) Zim Den (b) Guido van Rossum (c) Niene Stom (d) Wick van Rossum
2. In which year was the Python language developed?
(a) 1995 (b) 1972 (c) 1981 (d) 1989
3. In which language is Python written?
(a) English (b) PHP (c) C (d) All of the above
4. Which one of the following is the correct extension of the Python file?
(a) .py (b) .python (c) .p (d) None of these
5. In which year was the Python 3.0 version developed?
(a) 2008 (b) 2000 (c) 2010 (d) 2005
6. What do we use to define a block of code in Python language?
(a) Key (b) Brackets (c) Indentation (d) None of these
7. Which character is used in Python to make a single line comment?
(a) / (b) // (c) # (d) !
8. Which of the following is not a keyword in Python language?
(a) val (b) raise (c) try (d) with
9. Which of the following declarations is incorrect in python language?
(a) $xyzp = 5,000,000$ (b) $x y z p = 5000 6000 7000 8000$
(c) $x,y,z,p = 5000, 6000, 7000, 8000$ (d) $x y z p = 5,000,000$
10. Which of the following words cannot be a variable in python language?
(a) val (b) val (c) try (d) try
11. Which of the following operators is the correct option for power(ab)?
(a) $a \wedge b$ (b) $a ** b$ (c) $a \wedge \wedge b$ (d) $a \wedge * b$
12. Which of the following precedence order is correct in Python?
(a) Parentheses, Exponential, Multiplication, Division, Addition, Subtraction
(b) Multiplication, Division, Addition, Subtraction, Parentheses, Exponential
(c) Division, Multiplication, Addition, Subtraction, Parentheses, Exponential
(d) Exponential, Parentheses, Multiplication, Division, Addition, Subtraction
13. Which one of the following has the same precedence level?
(a) Division, Power, Multiplication, Addition and Subtraction
(b) Division and Multiplication
(c) Subtraction and Division
(d) Power and Division
14. Output of the program `a='Hello' print a[0]`
(a) H 4 (b) e (c) l (d) o
15. Output of the program `a = 'hello world' print a[3:5]`
(a) hel (b) lo (c) worl (d) rl




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Karad

Yashwantrao Chavan College of Science, Karad
Department of Mathematics
Short term Course - Mathematical Computation Using Python
Practical Exam (2023-24)

Date- 03/02/2024

Marks

Time-9:30 AM-10:30AM

Marks-40

Instructions:

- 1) All questions are compulsory.
- 2) Each question carry 2 marks.

Q. Choose the Correct Alternatives.

1. What arithmetic operators cannot be used with strings in Python?

- (a) *
- (b) -
- (c) +
- (d) All of the mentioned

2. Which of the following statements is used to create an empty set in Python?

- (a) {} (b) [] (c) {} (d) set()

3. To add a new element to a list we use which Python command?

- (a) list1.addEnd(5)
- (b) list1.addLast(5)
- (c) list1.append(5)
- (d) list1.add(5)

4. Which one of the following is the use of function in python?

- (a) Functions don't provide better modularity for your application
- (b) you can't also create your own functions
- (c) Functions are reusable pieces of programs
- (d) All of the mentioned

5. Which of the following is a Python tuple? -

- (a) {1, 2, 3} (b) {} (c) [1, 2, 3] (d) (1, 2, 3)

6. The process of pickling in Python includes _____

- (a) conversion of a Python object hierarchy into byte stream
- (b) conversion of a datatable into a list
- (c) conversion of a byte stream into Python object hierarchy
- (d) conversion of a list into a datatable

7. To terminate a loop we use the statement

- (a) stop (b) break (c) terminate (d) end

8. To skip the rest of the block of a loop and go to the beginning again we use the statement

- (a) start (b) skip (c) restart (d) continue

9. A Python module is a file with the file extension that contains valid Python code. 9

- (a) .pymodule(b) .pym (c) .module (d) .py

10. A package is a folder containing one or more Python modules. One of the modules in a

package must be called—

- (a) package .py (b) main.py (c) init .py (d) init.py

11. f = open('test.dat', 'w') f.write ('This is a test file') f.close()

(a) The above program delete existing file with the name 'test.dat'

(b) The above program only create a file named 'test.dat' and writes a string to it

(c) The above program only create a file named 'test.dat'

(d) The above program result error

12. Turtle module of python is

(a) used to read a file (b) used to write a file

(c) used to color words (d) used to create graphical patterns

13. Which of the following is true?

(a) arange(start, stop, step, dtype)

(b) arange(start, stop, dtype, step) 10

(c) arange(start,stop,dtype)

(d) arange(start,step,dtype,stop)



14. Which of the following function create an array?
(a) `arange()` (b) `array()` (c) `linspace()` (d) All of the above

15. `zeros(shape, datatype)` gives
(a) a list of zeros (b) a set of zeros (c) an array of zeros (d) none of these

16. The function `linalg.inv(matrix)` computes

- (a) transpose of a square matrix
- (b) inverse of a square matrix
- (c) determinant of inverse of a square matrix
- (d) adjoint of a square matrix

17. Output of the program from `pylab import *` `a = 2` `t = linspace(-2 * a, 2 * a, 101)` `x = a * cos(t)**3`

`y = a * sin(t)**3` `plot(x,y)` `show()` 11

- (a) astroid (b) spiral (c) ellipse (d) helix

18. Choose the following which is not a document class provided by Latex .
(a) book (b) letter (c) page (d) report

19. Which is correct syntax for Latex ?

- (a) `\begin{...}\stop{}`
- (b) `\begin{...}\end{}`
- (c) `\start{...}\stop{}`
- (d) `\start{...}\end{}`

20. Syntax for inline formula 12

- (a) $\$f(x)=x^2\$$
- (b) $\{f(x)=x^2\}$
- (c) $[f(x)=x^2]$
- (d) $(f(x)=x^2)$



Yashwantrao Chavan Pratishthan
Department of Science
Karad

Yashwantrao Chavan College of Science, Karad
Department of Mathematics
Short term Course - Mathematical Computation Using Python
Final Exam (2023-24)

Marks-30

Date- 28/02/2024

Time-9:30 AM-10:30AM

Instructions:

- 1) All questions are compulsory.
- 2) Each question carry 2 marks.

Q. Choose the Correct Alternatives.

1. Which type of Programming does Python support?

- (a) object-oriented programming
- (b) structured programming
- (c) functional programming
- (d) all of the mentioned

2. Is Python case sensitive when dealing with identifiers?

- (a) no
- (b) yes
- (c) machine dependent
- (d) none of the mentioned

3. All keywords in Python are in —

- (a) Capitalized
- (b) lower case
- (c) UPPER CASE
- (d) None of the mentioned

4. What will be the value of the following Python expression?

4 + 3

- (a) 7 (b) 2 (c) 4 (d) 1

5. Which keyword is used for function in Python language?

- (a) Function (b) Def (c) Fun (d) Define

6. Python supports the creation of anonymous functions at runtime, using a construct Called —

- (a) pi (b) anonymous (c) lambda (d) none of the mentioned

7. Which of the following functions is a built-in function in python?

- (a) factorial() (b) print() (c) seed() (d) sqrt()

8. Which of these is the definition for packages in Python?

- (a) A set of main modules
- (b) A folder of python modules
- (c) A number of files containing Python definitions and statements
- (d) A set of programs making use of Python modules

9. What arithmetic operators cannot be used with strings in Python?

- (a) * (b) - (c) + (d) All of the mentioned

10. Which of the following statements is used to create an empty set in Python?

- (a) {} (b) [] (c) {} (d) set()

11. To add a new element to a list we use which Python command?

- (a) list1.addEnd(5)
- (b) list1.addLast(5)
- (c) list1.append(5)
- (d) list1.add(5)

12. To terminate a loop we use the statement

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13. To skip the rest of the block of a loop and go to the beginning again we use the statement

- (a) start (b) skip (c) restart (d) continue

14. Turtle module of python is

- (a) used to read a file
- (b) used to write a file
- (c) used to color words
- (d) used to create graphical patterns

15. Which of the following function create an array

- (a) arrange() (b) array() (c) linspace() (d) All of the above




Principal

**Yashwantrao Chavan College of Science
Karad**

Yashwantrao Chavan College of Science, Karad

Department of Mathematics

Short term Course - Mathematical Computation Using Python (2023-24)

Mark list

Roll. No.	Name of Student	Mid-course exam (Out of 30)	Final Exam (Out of 30)	Practical Exam (Out of 40)	Total (Out of 100)
3147	ChavanSnehaRavindra	28	25	40	93
3148	Nangare SnehaDevdas	26	25	40	91
3150	Yadav Vivek Balaso	24	24	40	85
3151	Dhumal Anuradha Shivajirao	24	17	40	87
3152	Kothavale Gauree Mahadev	19	27	40	86
3153	Dabane Prajkta krishnat	24	28	40	89
3154	Pathan Ayesha Asif	21	26	40	87
3155	JadhavSwagata Sanjay	25	24	40	81
3156	KadamPrajaktaPrakash	24	25	40	86
3157	Tale Akaram Anna	23	19	40	87
3158	Galave Samadhan Jaywant	25	20	40	85
3159	Chalake Akanksha Arun	24	25	40	84



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Department of Mathematics

**Short term Course - Mathematical Computation Using Python (2023-24)
CO & PO attainment**

Average Attainment	Target Attainment level	Remark
3	Level 5	Target achieved

Course code	Course Title	% of students above 60 % of Final exam marks	Level of attainment Final exam	80% of attainment Level in Final exam (I)	% of students above 80 % of mid-course exam marks	Level of attainment	20% of attainment Level in mid-course exam (II)	Attainment of course(I+II)
Short term	Mathematical Computation Using Python	91.66	3	2.4	75.00	2	0.4	2.8

By using below attainment levels 1,2,3 for the Percent of students in B	
For internal exam	
Level 1	Less than 60% of students scoring more than average marks
Level 2	60% - 80% of students scoring more than average marks
Level 3	more than equal to 80% of students scoring more than average marks

Programme outcome level	Target Attainment
Level 1	0.5-1.0
Level 2	1.0-1.5
Level 3	1.5-2.0
Level 4	2.0-2.5
Level 5	2.5-3.0



(Signature)
Principal

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Department of Mathematics

Short Term Course

“Mathematical Computation Using Python”

Year 2023-24

Theory Exam Attendance

Roll No.	Name of Student	Internal Signature	External Signature
3147	Chavan Sneha Ravindra		
3148	Nangare Sneha Devdas		
3150	YadavVivekBalaso		
3151	Dhumal Anuradha Shivajirao		
3152	Kothavale Gauree Mahadev		
3153	Dabane Prajkta krishnat		
3154	Pathan Ayesha Asif		
3155	Jadhav Swagata Sanjay		
3156	Kadam Prajakta Prakash		
3157	Tale Akaram Anna		
3158	Galave Samadhan Jaywant		
3159	Chalake Akanksha Arun		



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YASHWANTRAO CHAVAV COLLEGE OF SCIENCE, KARAD

Department of Mathematics

Short Term Course - "Python Programming"

Year 2023-24

Attendance Dec-2023

Roll No.	Name of Student	2/12/23	2/12/23	8/12/23	9/12/23	15/12/23	15/12/23	22/12/23	23/12/23	30/12/23
3147	Chavan Sneha Ravindra	Chavan	Chavan	Chavan	Chavan	Chavan	Chavan	Chavan	Chavan	Chavan
3148	Nangare Sneha Devdas	S.D.N	S.D.N	S.D.N	S.D.N	S.D.N	S.D.N	S.D.N	S.D.N	S.D.N
3150	Yadav Vivek Balaso	Vivek	Vivek	Vivek	Vivek	Vivek	Vivek	Vivek	Vivek	Vivek
3151	Dhumal Anuradha Shivajirao	Dhumal	Dhumal	Dhumal	Dhumal	Dhumal	Dhumal	Dhumal	Dhumal	Dhumal
3152	Kothavale Gauree Mahadev	Kothavale	Kothavale	Kothavale	Kothavale	Kothavale	Kothavale	Kothavale	Kothavale	Kothavale
3153	Dabane Prajakta Krishnat	Dabane	Dabane	Dabane	Dabane	Dabane	Dabane	Dabane	Dabane	Dabane
3154	Pathan Ayesha Asif	Pathan	Pathan	Pathan	Pathan	Pathan	Pathan	Pathan	Pathan	Pathan
3155	Jadhav Swagata Sanjay	Jadhav	Jadhav	Jadhav	Jadhav	Jadhav	Jadhav	Jadhav	Jadhav	Jadhav
3156	Kadam Prajakta Prakash	Kadam	Kadam	Kadam	Kadam	Kadam	Kadam	Kadam	Kadam	Kadam
3157	Tale Akaram Anna	Tale	Tale	Tale	Tale	Tale	Tale	Tale	Tale	Tale
3158	Galave Samadhan Jaywant	Galave	Galave	Galave	Galave	Galave	Galave	Galave	Galave	Galave
3159	Chalake Akanksha Arun	Chalake	Chalake	Chalake	Chalake	Chalake	Chalake	Chalake	Chalake	Chalake




Principal
 Yashwantrao Chavan College of Science
 Karad

YASHWANTRAO CHAVAV COLLEGE OF SCIENCE, KARAD

Department of Mathematics

Short Term Course - "Python Programming"

Year 2023-24

Attendance Jan-2024

Roll No.	Name of Student	5/1/24	6/1/24	12/1/24	13/1/24	13/1/24	13/1/24	19/1/24	20/1/24	20/1/24	27/1/24
3147	Chavan Sneha Ravindra	Chavan S.D.N	Chavan S.D.N	Chavan S.D.N	Chavan S.D.N	Chavan S.D.N	Chavan S.D.N	Chavan S.D.N	Chavan S.D.N	Chavan S.D.N	Chavan S.D.N
3148	Nangare Sneha Devdas	Wk.	Wk.	Wk.	Wk.	Wk.	Wk.	Wk.	Wk.	Wk.	Wk.
3150	Yadav Vivek Balaso	Dhumal	Dhumal	Dhumal	Dhumal	Dhumal	Dhumal	Dhumal	Dhumal	Dhumal	Dhumal
3151	Dhumal Anuradha Shivajirao	Kothavale	Kothavale	Kothavale	Kothavale	Kothavale	Kothavale	Kothavale	Kothavale	Kothavale	Kothavale
3152	Kothavale Gauree Mahadev	Dabane	Dabane	Dabane	Dabane	Dabane	Dabane	Dabane	Dabane	Dabane	Dabane
3153	Dabane Prajakta krishnat	Pathan	Pathan	Pathan	Pathan	Pathan	Pathan	Pathan	Pathan	Pathan	Pathan
3154	Pathan Ayesha Asif	JSS	JSS	JSS	JSS	JSS	JSS	JSS	JSS	JSS	JSS
3155	Jadhav Swagata Sanjay	Pradham	Pradham	Pradham	Pradham	Pradham	Pradham	Pradham	Pradham	Pradham	Pradham
3156	Kadam Prajakta Prakash	Tale.A.A	Tale.A.A	Tale.A.A	Tale.A.A	Tale.A.A	Tale.A.A	Tale.A.A	Tale.A.A	Tale.A.A	Tale.A.A
3157	Tale Akaram Anna	G.S.J	G.S.J	G.S.J	G.S.J	G.S.J	G.S.J	G.S.J	G.S.J	G.S.J	G.S.J
3158	Galave Samadhan Jaywant	Chavan	Chavan	Chavan	Chavan	Chavan	Chavan	Chavan	Chavan	Chavan	Chavan
3159	Chalake Akanksha Arun										




Principal
 Yashwantrao Chavan College of Science
 Karad

YASHWANTRAO CHAVAV COLLEGE OF SCIENCE, KARAD

Department of Mathematics

Short Term Course - "Python Programming"

Year 2023-24

Attendance Feb-2024

Roll No.	Name of Student	21/2/24	31/2/24	9/2/24	10/2/24	16/2/24	17/2/24	23/2/24	24/2/24	24/2/24
3147	Chavan Sneha Ravindra	Chavan	AB	Chavan	Chavan	Chavan	Chavan	Chavan	Chavan	Chavan
3148	Nangare Sneha Devdas	S.D.N	S.D.N	S.D.N	S.D.N	S.D.N	S.D.N	AB	S.D.N	S.D.N
3150	Yadav Vivek Balaso	Vy.	Vy.	Vy.	Vy.	Vy.	Vy.	AB	AB	U.
3151	Dhumal Anuradha Shivajirao	Dhumal	Dhumal	Dhumal	AB	Dhumal	Dhumal	Dhumal	Dhumal	Dhumal
3152	Kothavale Gauree Mahadev	Kothavale	Kothavale	Kothavale	Kothavale	AB	Kothavale	Kothavale	AB	Kothavale
3153	Dabane Prajakta krishnat	Dabane	Dabane	Dabane	Dabane	Dabane	AB	Dabane	Dabane	Dabane
3154	Pathan Ayesha Asif	Pathan	Pathan	Pathan	Pathan	AB	Pathan	Pathan	AB	Pathan
3155	Jadhav Swagata Sanjay	JSS	JSS	JSS	AB	JSS	JSS	JSS	JSS	JSS
3156	Kadam Prajakta Prakash	Prakash	Prakash	Prakash	Prakash	AB	Prakash	AB	Prakash	Prakash
3157	Tale Akaram Anna	Tale	Tale	Tale	AB	Tale	Tale	Tale	Tale	Tale
3158	Galave Samadhan Jaywant	G.S.J	G.S.J	G.S.J	G.S.J	G.S.J	G.S.J	G.S.J	G.S.J	G.S.J
3159	Chalake Akanksha Arun	Chalake	Chalake	Chalake	Chalake	Chalake	AB	Chalake	Chalake	AB




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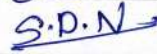

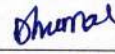
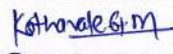
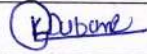
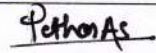

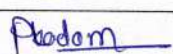
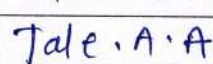
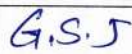
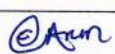
Department of Mathematics

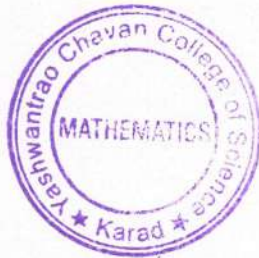
Short Term Course

“Mathematical Computation Using Python”

Year 2023-24

Certificate Distribution

Roll No.	Name of Student	Signature
3147	Chavan Sneha Ravindra	
3148	Nangare Sneha Devdas	
3150	Yadav Vivek Balaso	
3151	Dhumal Anuradha Shivajirao	
3152	Kothavale Gauree Mahadev	
3153	Dabane Prajкта krishnat	
3154	Pathan Ayesha Asif	
3155	Jadhav Swagata Sanjay	
3156	Kadam Prajakta Prakash	
3157	Tale Akaram Anna	
3158	Galave Samadhan Jaywant	
3159	Chalake Akanksha Arun	



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Yashwantrao Chavan College of Science, Karad



- Vidyanagar, Karad - 415 124.
- Reaccredited B++ Level by NAAC, Bangalore.
- An ISO 9001 : 2015 Certified College



Short Term Course

Certificate of Completion

This is to certify that Mr./Miss. Tale Akaram Anna
of Class B.Sc III has Completed Short Term Course (3 Months) in _____

Mathematical Computation using Python conducted by the department of

Mathematics during the academic year 2023-2024


Course Co-ordinator


Head of the Department


IQAC Co-ordinator


Principal

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Short Term Course

Certificate of Completion

This is to certify that Mr./Miss. Pathax Ayesha Asif
of Class B.Sc III has Completed Short Term Course (3 Months) in _____
Mathematical Computation using python conducted by the department of
Mathematic during the academic year 2023 - 2024


Course Co-ordinator


Head of the Department


IGAC Co-ordinator


Principal

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Short Term Course

Certificate of Completion

This is to certify that Mr./Miss. Kadam Prejyeta Prakash
of Class B.Sc III has Completed Short Term Course (3 Months) in _____

Mathematical Computation using python conducted by the department of
Mathematics during the academic year 20 23 - 20 24

P. S. W. S.
Course Co-ordinator

Anurag
Head of the Department

P. S. W. S.
IQAC Co-ordinator

P. S. W. S.
Principal

Estd.:

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Short Term Course

Certificate of Completion

This is to certify that Mr./Miss. Shumal Anuratha Shingirao
of Class B.Sc III has Completed Short Term Course (3 Months) in _____
Mathematical computation using python conducted by the department of
Mathematics during the academic year 2023 - 2024

Shumal
Course Co-ordinator

Shumal
Head of the Department

Shumal
IQAC Co-ordinator

Shumal
Principal

Estd.:

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Short Term Course

Certificate of Completion

This is to certify that Mr./Miss. Yadav Vivek Belaso
of Class B.Sc III has Completed Short Term Course (3 Months) in _____
Mathematical computation Using Python conducted by the department of
Mathematics during the academic year 2022 - 2024

Prasad
Course Co-ordinator

Prasad
Head of the Department

Prasad
IQAC Co-ordinator

Prasad
Principal

Estd. :

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Short Term Course

Certificate of Completion

This is to certify that Mr./Miss. Dahane Projekta Krishmat
of Class B.Sc III has Completed Short Term Course (3 Months) in _____
Mathematical Computation using Python conducted by the department of
Mathematics during the academic year 2023 - 20 24


Course Co-ordinator


Head of the Department


IQAC Co-ordinator


Principal

Estd. :

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Short Term Course

Certificate of Completion

This is to certify that Mr./Miss. Galawe Sumadhan Jaydant
of Class B.Sc III has Completed Short Term Course (3 Months) in _____
Mathematical Computation using Python conducted by the department of
Mathematics during the academic year 2023 - 2024

Dyut
Course Co-ordinator

Arjun
Head of the Department

Arjun
IGAC Co-ordinator

Arjun
Principal

Estd. :

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Short Term Course

Certificate of Completion

This is to certify that Mr./Miss. Jadhav Swagata Sanjay
of Class B.Sc.III has Completed Short Term Course (3 Months) in _____
Mathematical Computation using python conducted by the department of
Mathematics during the academic year 2024 - 2024

Blanca
Course Co-ordinator

Amia
Head of the Department

[Signature]
IQAC Co-ordinator

[Signature]
Principal

Estd.:

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Short Term Course

Certificate of Completion

This is to certify that Mr./Miss. Chavan Sneha Ravindra

of Class B.Sc III has Completed Short Term Course (3 Months) in

Mathematical computation using python conducted by the department of

Mathematics during the academic year 2023 - 2024

Pravin
Course Co-ordinator

Arund
Head of the Department

Pravin
IQAC Co-ordinator

Pravin
Principal

Estd.:

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Short Term Course

Certificate of Completion

This is to certify that Mr./Miss. Nargate Sheha Dexas
of Class B.Sc III has Completed Short Term Course (3 Months) in _____
Mathematical Computation Using Python conducted by the department of
Mathematics during the academic year 2023 - 2024


Course Co-ordinator


Head of the Department


IQAC Co-ordinator


Principal