



# **CERTIFICATE COURSE ON PYTHON PROGRAMMING CONDUCTED BY DEPARTMENT OF PHYSICS**

Python is a ubiquitous programming language that has a wide variety of applications. From machine learning to web development, the Python language finds uses in industries and companies most of you are already familiar with. This course will take you through the ins and outs of the Python programming language. It covers what Python is, where it is used and why it is so popular, how to install Python, as well as some fundamentals of the language.

**For more Information, contact Dedhila Devadathan (coordinator)  
Ph. No: 9446454083**

For more information  
contact Dedhila Devadathan  
Ph. No: 9446454083

# **PYTHON PROGRAMMING**

**SYLLABUS (Theory: 32 Hrs and Practicals: 8 Hrs)**

## **Chapter I: Programming Basics and Strings (8 hours)**

Starting code Editor, Using code Editor's Python Shell, Beginning to Use Python — Strings, Putting Two Strings Together, Displaying Strings with Print, Numbers and Operators, Variables — Names for Values, Using More Built-in Types, Making Decisions, if, Repetition, Using a while Loop, Handling Errors.

## **Chapter III: arrays and functions (7 hours)**

Python arrays, Defining a Function, Experimenting with Comments, Invoking a Function with Parameters, modules, Creating a Module, Importing a Module.

## **Chapter III: Python Classes and objects (8 hours)**

Thinking about programming, Defining a Class: Creating an Object from your Class, Writing an Internal Method, Writing Interface Methods, Using More Methods.

## **Chapter IV: Advanced Python(9 hours)**

Writing a GUI with Python, GUI Programming Toolkits for Python, PyGTK Introduction, Using Python for XML, applications of python.

## **Practical Exercises(08 Hours)**

1. Write a Python code to find the largest of two numbers.
2. Write a python code to find the factorial of a number.
3. Write a python code to check whether a number is even or odd.
4. Write a python code to check whether a number is prime or not.
5. Python program to read and display an array.
6. Python program to find the largest number in an array.
7. Python program to check whether an element is present in a list.
8. Python program to find the length of a string
9. Python program to implement call by reference
10. Python program to create a class and object.

**Books for study :**

1. Beginning Python , Peter Norton, Alex Samuel, David Aitel, Eric Foster-Johnson, Leonard Richardson, Jason Diamond, Aleatha Parker, Michael Roberts. Wiley Publishing, Inc.
2. Python: The Complete Reference, Martin C Brown, McGraw Hill Education; Forth edition.
3. Think Python, Allen B. Downey, O'Reilly Media, Inc., Second Edition.

Dept. of Physics  
Sree Narayana College  
Kollam-691 001

*Sree Narayana*  
Principal  
Sree Narayana College  
Kollam



## **SREE NARAYANA COLLEGE, KOLLAM**

### **DEPARTMENT OF PHYSICS**

#### **Certificate Courses**

#### **Members of the Board Studies**

The following faculties are selected as Members of Board of studies for Certificate courses (Microprocessor and Microcontrollers, Python Programming) Conducted by Department of Physics, Sree Narayana College, Kollam in the academic year 2019-20.

	<b>Name</b>	<b>Designation</b>
1	Dr. R. Sunilkumar	Principal, Associate Professor, Department of Malayalam, Sree Narayana College, Kollam.
2	Dr.G.Sajeevkumar	Associate Professor, Department of Physics, Sree Narayana College, Kollam.
3	Sri. Srijith S	Assistant Professor, Department of Physics, Sree Narayana College, Kollam
4	Smt. Asitha L.R	Assistant Professor, Department of Physics, Sree Narayana College, Kollam
5	Sri. Baiju V	Assistant Professor, Department of Physics, Sree Narayana College, Kollam
6	Dr. Dedhila Devadathan	Assistant Professor, Department of Physics, Sree Narayana College, Kollam
7	Dr. Sankar S	Assistant Professor, Department of Physics, Sree Narayana College, Kollam
8	Dr. Roxy M S	Assistant Professor, Department of Physics, Sree Narayana College, Kollam
9	Dr. Vidya S	Assistant Professor, Department of Physics, Sree Narayana College, Kollam

Date: 01/08/2019  
Sree Narayana College  
Kollam-681 001

10	Smt. Rehna R	Assistant Professor, Department of Physics, Sree Narayana College, Kollam
11	Smt. Saranya Babu	Assistant Professor, Department of Physics, Sree Narayana College, Kollam
14	Dr. Mohammad Salim	Assistant Professor, Department of Physics, TKMCAS
15	Sri. Safir T	Assistant Professor, Department of Physics, TKMCAS
16	Smt. Aparna L R	Assistant Professor, Department of Physics, Sree Narayana College, Kollam TKMCAS
17	Dr. P. K. Manoj	Assistant Professor, Department of Physics, Sree Narayana College, Kollam TKMCAS

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# **SREE NARAYANA COLLEGE, KOLLAM**

## **DEPARTMENT OF PHYSICS**

### **Minutes of the Meeting**

The minutes of the meeting of the BoS of Certificate courses was held on 28th August, 2019 in the Department of Physics, Sree Narayana College, Kollam at 10.00 a.m. The following members were present for the meeting.

1	Dr.Sajeev Kumar G	9	Smt.Rehna R
2	Dr.Sankar S	10	Smt.SaranyaBabu
3	Smt. Asitha L R	11	Sri. Vipin Kumar C
4	Sri. Srijith S	12	Smt. Aparna L.R
5	Sri. Baiju V	13.	Dr. Muhammed Salim
6	Dr. Roxy M S	14	Dr.P. K. Manoj
7	Dr. Dedhila Devadathan	15.	Sri. Saffir T K
8	Dr. Vidya S		

The following points were discussed in the meeting.

- The BoS has decided to initiate the following courses in the academic year 2019-20.
1. **MICROPROCESSOR AND MICROCONTROLLER (MM)**
  2. **PYTHON PROGRAMMING (PY)**
- The syllabus for the above courses was designed by the committee by considering the global needs and demand of the market.
  - It was decided to conduct the above courses for more than 30 hours.
  - The committee has framed the time- table apart from the academic hours.
  - While running the course there are some expenditures such remuneration for the trainers, stationery and miscellaneous. Therefore, the minimum affordable fees should be charged.
  - The committee has suggested to appoint the trainers for the above courses.
  - The board has decided to initiate the certificate courses as per the demand of the stakeholders and approval of I.Q.A.C.

Sri. Srijith S proposed vote of thanks and the meeting was ended.



Head of Physics  
Sree Narayana College  
Kollam-691 001

# SREE NARAYANA COLLÈGE, KOLLAM

## DEPARTMENT OF PHYSICS

The following faculties are selected as trainers for Certificate courses (Microprocessor and Microcontrollers, Python Programming) Conducted by Department of Physics, Sree Narayana College, Kollam in the academic year 2019-20.

<b>List of Teachers - Microprocessor and Microcontrollers</b>				
	<b>Name</b>	<b>College</b>	<b>Mobile no:</b>	<b>mail id</b>
1	Dr.G.Sajeevkumar	SNCK	9447064602	<a href="mailto:sajeevkumarg@gmail.com">sajeevkumarg@gmail.com</a>
2	Sri. Srijith S	SNCK	9633500425	<a href="mailto:srijithkeanu@gmail.com">srijithkeanu@gmail.com</a>
3	Smt.Asitha L.R	SNCK	9995213881	<a href="mailto:asitha85@gmail.com">asitha85@gmail.com</a>
4	Sri. Baiju V	SNCK	8281856366	<a href="mailto:baijuvkollam@gmail.com">baijuvkollam@gmail.com</a>
5	Sri Safir T	TKMCAS	9946635799	<a href="mailto:stkphy@gmail.com">stkphy@gmail.com</a>

List of Teachers - Python Programming				
	Name	College	Mobile no:	mail id
1	Dr.Dedhila Devadathan	SNCK	9446454083	<a href="mailto:dedhila@gmail.com">dedhila@gmail.com</a>
2	Dr Roxy M S	SNCK	9495243029	<a href="mailto:roxyms@gmail.com">roxyms@gmail.com</a>
3	Dr Vidya S	SNCK	9745464525	<a href="mailto:vidyaasnair@gmail.com">vidyaasnair@gmail.com</a>
4	Smt Rehna R	SNCK	8281328303	<a href="mailto:rehnaraju@gmail.com">rehnaraju@gmail.com</a>
5	Sri Safir T	TKMCAS	9946635799	<a href="mailto:stkphy@gmail.com">stkphy@gmail.com</a>



**SREE NARAYANA COLLEGE, KOLLAM**

**DEPARTMENT OF PHYSICS**

**CERTIFICATE COURSE TIME TABLE**

**Name: PYTHON PROGRAMMING (PY)**

**Duration: 30 Hrs**

**Start Date: JAN 15 2020**

**End Date: MAY 15 2020**

DAY /03:30 PM TO 04:30 PM	HANDLED BY
MONDAY	BAIJU V
TUESDAY	Dr. VIDYA S
WEDNESDAY	Dr. SANKAR S
THURSDAY	PRACTICAL HOURS ( Dr. ROXY M S/ VIPIN KUMAR C )
FRIDAY	SAFFIR T K / Dr. P. K. MANOJ

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**SREE NARAYANA COLLEGE, KOLLAM**  
**DEPARTMENT OF PHYSICS**  
**CERTIFICATE COURSE**

Name : **PYTHON PROGRAMMING (PY)**

Duration : 30 Hrs

Start Date: JAN 15 2020

End Date:

May 15 2020

**LIST OF STUDENTS**

Sl No	Name of the Student	Gender	Email Id	Class	Mobile No	Year of Admission
1	KAVYA S.	F	kavya6885@gmail.com	BSc. Physics	9497865519	2018
2	ANJALI S.	F	anjaliipvm98@gmail.com	BSc. Physics	7909297398	2018
3	MEGHA K.	F	meghamply2000@gmail.com	BSc. Physics	7594836838	2018
4	VISHNU S.	M	vishnusuresh34595@gmail.com	BSc. Physics	9656014094	2018
5	VISWAJITH S.	M	viswajithrevathy@gmail.com	BSc. Physics	7559910611	2018
6	APARNA P.	F	aparnaprakashan5@gmail.com	BSc. Physics	9895006915	2018
7	DEEPEESH S. G..	M	deepesh2555634@gmail.com	BSc. Physics	7025086885	2018
8	AKHILA A. L.	F	akhilani897@gmail.com	BSc. Physics	7510643489	2018
9	GREESHMA BABU	F	sreedharanbabu022@gmail.com	BSc. Physics	7902881629	2018
10	AKHIL S.	M	akhilsktr2000@gmail.com	BSc. Physics	9847713750	2018
11	VISMA YA	F	benansonkundara@gmail.com	BSc. Physics	8078482132	2018
12	ADHIN PRADEEP	M	adhinpradeep007@gmail.com	BSc. Physics	7025440625	2018
13	PRANAV J. S.	M	pranavis56@gmail.com	BSc. Physics	7909299281	2018
14	V. S. VISHNU MOHAN	M	me.hivishnu@gmail.com	BSc. Physics	9400349905	2018
15	ABHINANDANA B.	F	abhinandanaabhi28@gmail.com	BSc. Physics	9497836358	2018
16	AJIN DEV	M	ajindev2000@gmail.com	BSc. Physics	7034202040	2018
17	ATHUL YA RAVIKUMAR	F	athulyaravikumar777@gmail.com	BSc. Physics	7510832460	2018
18	POOJA RAJ	F	poojarajmanangkunn@gmail.com	BSc. Physics	9074785116	2018
19	AKSHAY S.KUMAR	M	akshayskumar366@gmail.com	BSc. Physics	9605840168	2018
20	VISHNU RAVEENDRAN	M	vishnuraveendran2018@gmail.com	BSc. Physics	7994237801	2018

10/5/2020  
10/5/2020

21	VARSHA BABU	F	varshababu121131@gmail.com	BSc. Physics	9633846507	2018
22	AKHIL RAJ R.	M	akhilrajgeetha@gmail.com	BSc. Physics	8547410279	2018
23	POOJA RAI A.	F	poojaraja080700@gmail.com	BSc. Physics	9747518782	2018
24	ANJANA BABU A.	F	ambikaambikababu134@gmail.com	BSc. Physics	9048784783	2018
25	FERNA FARHEEN M. K.	F	fernafarheennk@gmail.com	BSc. Physics	9207017950	2018
26	AHALYA A.	F	ahalvaa60@gmail.com	BSc. Physics	9072502642	2018
27	ARUNIMA A. S.	F	arunimasureshezhucone@gmail.com	BSc. Physics	9645943179	2018
28	ARUN J. K.	M	arunj2000@gmail.com	BSc. Physics	9496691780	2018
29	BINIL B.	M	binilbalu369@gmail.com	BSc. Physics	7902766714	2018
30	REEJA K. GEORGE	F	reejakgeorge@gmail.com	BSc. Physics	9188001680	2018
31	GOKUL RAJ	M	gokulrajsreevinayakasdp@gmail.com	BSc. Physics	7356105048	2018

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# SREE NARAYANA COLLEGE ,KOLLAM

## DEPARTMENT OF PHYSICS

### CERTIFICATE COURSE

Name : PYTHON PROGRAMMING (PY)

Duration : 30 Hrs

Start Date: JAN 15 2020

End Date:

May 15 2020

### ATTENDANCE STATEMENT

SI No	Name of the Student	Register No:	% of Attendance
1	KAVYA S.	PY20001	88
2	ANJALI S.	PY20002	86
3	MEGHA K.	PY20003	89
4	VISHNU S.	PY20004	87
5	VISWAJITH S.	PY20005	80
6	APARNA P.	PY20006	86
7	DEEPESH S. G..	PY20007	85
8	AKHILA A. L.	PY20008	88
9	GREESHMA BABU	PY20009	87
10	AKHIL S.	PY20010	89
11	VISMAYA	PY20011	80
12	ADHIN PRADEEP	PY20012	90
13	PRANAV J. S.	PY20013	91
14	V. S. VISHNU MOHAN	PY20014	92
15	ABHINANDANA B.	PY20015	93
16	AJIN DEV	PY20016	88
17	ATHULYA RAVIKUMAR	PY20017	87
18	POOJA RAJ	PY20018	89
19	AKSHAY S.KUMAR	PY20019	80
20	VISHNU RAVEENDRAN	PY20020	98
21	VARSHA BABU	PY20021	93
22	AKHIL RAJ R.	PY20022	85
23	POOJA RAJ A.	PY20023	86
24	ANJANA BABU A.	PY20024	87
25	FERNA FARHEEN M. K.	PY20025	84
26	AHALYA A.	PY20026	83
27	ARUNIMA A. S.	PY20027	82
28	ARUN J. K.	PY20028	80
29	BINIL B.	PY20029	83
30	REEJA K. GEORGE	PY20030	84
31	GOKUL RAJ	PY20031	82

Karunya  
 Anjali  
 Megha K  
 Vishnu  
 Aparna  
 Deepesh  
 Akhila  
 Greeshma  
 Akhil  
 Vismaya  
 Adhin Pradeep  
 Pranav  
 V. S. Vishnu Mohan  
 Abhinandan  
 Ajin Dev  
 Athulya  
 Pooja  
 Akshay-Skumar  
 Vishnu  
 Varsha  
 Akhil  
 Pooja  
 Anjana  
 Ferna  
 Ahalya  
 Arunima  
 Arun  
 Binil  
 Reeya  
 Gokul.

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**SREE NARAYANA COLLEGE ,KOLLAM**

**DEPARTMENT OF PHYSICS**

**CERTIFICATE COURSE**

**Name :** PYTHON PROGRAMMING (PY)

**Duration :** 30 Hrs

**Start Date:** Jan 15 2020

**End Date:**

May 15 2020

**MARK LIST**

Sl. No.	Name of the student	Marks Obtained			
		Theory (50)	Practical (40)	Assignment (10)	Total (100)
1	KAVYA S.	35	34	10	79
2	ANJALI S.	39	35	10	84
3	MEGHA K.	44	34	10	88
4	VISHNU S.	41	35	10	86
5	VISWAJITH S.	44	36	10	90
6	APARNA P.	46	36	10	92
7	DEEPESH S. G..	41	34	10	85
8	AKHILA A. L.	45	35	10	90
9	GREESHMA BABU	39	34	10	83
10	AKHIL S.	43	35	10	88
11	VISMAYA	40	34	10	84
12	ADHIN PRADEEP	41	34	10	85
13	PRANAV J. S.	42	35	10	87
14	V. S. VISHNU MOHAN	43	35	10	88
15	ABHINANDANA B.	45	34	10	89
16	AJIN DEV	44	34	10	88
17	ATHULYA RAVIKUMAR	42	33	10	85
18	POOJA RAJ	43	36	10	89
19	AKSHAY S.KUMAR	41	37	10	88
20	VISHNU RAVEENDRAN	40	34	10	84
21	VARSHA BABU	43	34	10	87
22	AKHIL RAJ R.	39	35	10	84
23	POOJA RAJ A.	40	34	10	84
24	ANJANA BABU A.	41	35	10	86
25	FERNA FARHEEN M. K.	42	34	10	86
26	AHALYA A.	42	36	10	88
27	ARUNIMA A. S.	46	34	10	90
28	ARUN J. K.	41	35	10	86
29	BINIL B.	44	34	10	88
30	REEJA K. GEORGE	40	33	10	83
31	GOKUL RAJ	38	35	10	83



Dept. of Physics  
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Kollam-691 001

# SREE NARAYANA COLLEGE, KOLLAM

## DEPARTMENT OF PHYSICS

### Minutes of the Meeting

The minutes of the meeting of the BoS of Certificate courses was held on 10th February, 2020 in the Department of Physics, Sree Narayana College, Kollam at 10.00 a.m. The following members were present for the meeting.

- |   |                        |     |                    |
|---|------------------------|-----|--------------------|
| 1 | Smt. Asitha L R        | 7   | Smt. Rehna R       |
| 2 | Sri. Srijith S         | 8   | Smt. Saranya Babu  |
| 3 | Sri. Baiju V           | 9   | Sri. Vipin Kumar C |
| 4 | Dr. Roxy M S           | 10  | Smt. Aparna L.R    |
| 5 | Dr. Dedhila Devadathan | 11. | Dr. Muhammed Salim |
| 6 | Dr. Vidya S            | 12  | Dr. P. K. Manoj    |
|   |                        | 13. | Sri. Saffir T K    |

The following points were discussed in the meeting.

- It was decided to conduct the above courses for more than 30 hours through online platform Google meet.
- The committee has framed the time- table for the online classes.
- The Committee decided to charge minimum fees for the courses.
- The committee suggested to strictly follow the Covid protocol during practical classes.
- The committee has suggested to consider the suggestions of the stake holders about the timing of the class.
- The minimum attendance for the successful completion of the course is decided to be 75%.
- The minimum marks required for the qualification is decided to be 25 marks for Theory and 20 marks for Practicals.
- The submission of the assignment is compulsory for the successful completion of the course.

Sri. Saffir P.K proposed vote of thanks and the meeting was ended.

*Sri. Saffir P.K.*  
Principal  
Sree Narayana College  
Kollam







# **Sree Narayana College, Kollam**

**Re-Accredited by NAAC with "A" Grade**

Affiliated to the University of Kerala

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**Dr. Sunilkumar R.**

**M.A, M.Phil., Ph.D**

**Principal**

Mob No.: 9387500997

Email : [sunilanena@gmail.com](mailto:sunilanena@gmail.com)

Ref: PL/8030 /2022

Date.....  
05.01.2022

## **Certificate**

Certified that **Aparna L.R, Assistant Professor, Department of Physics, TKM College of Arts and Science, Kollam**, is a member of the Board of studies for framing the syllabus and curriculum for the certificate courses offered by the Department of Physics of this college during the academic year 2019-20

PRINCIPAL

# **REPORT ON CERTIFICATE COURSE IN MICROPROCESSOR AND MICROCONTROLLER AND PYTHON PROGRAMMING**

## **DEPARTMENT OF PHYSICS**

**ACADEMIC YEAR 2019-20**

- The BoS has decided to initiate the following courses in the academic year 2019-20.

### **1. MICROPROCESSOR AND MICROCONTROLLER (MM)**

### **2. PYTHON PROGRAMMING (PY)**

- The syllabus for the above courses was designed by the committee by considering the global needs and demand of the market.
- It was decided to conduct the above courses for more than 30 hours.
- The committee has framed the time- table apart from the academic hours.
- The committee suggested to strictly follow the Covid protocol during practical classes.
- While running the course there are some expenditures such remuneration for the trainers, stationery and miscellaneous. Therefore, the minimum affordable fees should be charged.
- The committee has suggested to appoint the trainers for the above courses.
- The Classes and tests were conducted through Online Platform.
- The board has decided to initiate the certificate courses as per the demand of the stakeholders and approval of I.Q.A.C.

The Python Fundamentals for Beginners course offers a base knowledge of various Python concepts, starting from its introduction. The Course was intended to learn about variables in programming, decision-making statements, looping statements, algorithmic approaches, object-oriented programming concepts, and functions which are the essential elements that contribute to structuring any programming language. After inheritance, students completed an assignment and an exam to test their knowledge to complete the course and earned a free certificate. After completing this free, self-paced, beginner's guide to Python, you can embark on your **Software and**

IT career with a professional Post Graduate certificate and learn various concepts with millions of aspirants across the globe.

Duration: 08 hrs Practical and 32 hrs theory

The students have completed 30 sessions including theory and practical during the period January 2020 - May 2020.

Total Students Successfully Completed: 31

**Microprocessor and Microcontroller** course will start with a discussion on a simple microprocessor, 8085. Understanding this architecture is the basis to follow any other complex CPU architecture. It will be followed by a complete overview of a range of microcontrollers covering 8051, 8086, I/O interfacing and microcontrollers. The hardware intricacies of these processors and their programming will be covered. Students developed an in-depth understanding of the structure and operations of Microprocessors & Microcontrollers, and interfacing techniques and basic understanding of hardware and software interaction and integration.

Duration: 08 hrs Practical and 32 hrs theory

The students have completed 30 sessions including theory and practical during the period September 2019- January 2020.

Total Students Successfully Completed: 30



Dr. J. J. J. J.  
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