



# भारत अंतरिक्ष सप्ताह INDIA SPACE WEEK



## INDIA SPACE WEEK PROGRAMME

Organized by INDIA SPACE WEEK

### About ISW Courses

India Space Week aims to grow and develop interest in all students regarding the space world and upcoming tools, techniques, technologies, and their applications using online learning platforms. ISW conducts courses, events, webinars, workshops, seminars, and live interaction sessions with space agencies, experts, and industrialists. The association monitors participants' attendance, awards certificates, and conducts examinations for assessment of students' performances.

### Learning Objectives of ISW Courses

- To develop students' interest in astronomy, astrophysics, and space science.
- To inculcate the scientific and critical thinking needed for spatial knowledge and skills.
- To induce independent thinking and create aptitude for space research.
- To improve observation, analytical, and interpretation skills in students
- To help them use their knowledge and skills for employment in agriculture, IT, defence, safety, and security areas.

**Teaching mode of ISW course:** Currently the association conducts its courses through “Live and Interactive classroom online session”.



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**Course Name: *PYTHON ONLINE PROGRAMMING***

**Course Code: 3001**

**(For All)**

**Course Duration: 1 Month**

**Exam Type: Written MCQ based 50 questions (50 Marks)**

**&**

**Practical Project (50 Marks)**

**Objective :** To learn about Python programming language and its application

## **1. Python Introduction**

- What is Programming Language?
  - Python Interpreter
  - Python version
- Advantages of Python Language
- Usage of Python in different fields
  - Write First Program
- Multi line Print Statement and Comments in Python

## **2. Variables and Data types and Operators**

- Introduction to Variable
  - Datatype
- User-Input and Operators in Python

## **3. Control Statements**

- Conditional statement and Types



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## 4. Introduction to Loops

- Types of Loops
  - For Loops
  - While Loops
- Writing Programs with Loops
- Loops with conditional statement
  - Infinite Loop, Nested Loops
- Break and Continue Statement

## 5. Strings

- Introduction
  - Indexing
- Slicing and Iteration

## 6. Python Lists

- Introduction
  - Iteration
  - Slicing
- List Functions

## 7. Set

- Introduction
  - Iterations
- Methods of Sets



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## 8. Tuples

- Introduction
- Iterations
- Function
- Making Multiple Tuples

## 9. Dictionary

- Creation of Dictionaries
  - Iterations
- Dictionary Functions and Nested Dictionaries

## 10. Functions

- Introduction
  - Types
- Parameters
- Arguments
- Args, Kwags
- Recursion

## Practical

- Provides mini projects with classes that helps students in applying learned concepts.



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- Provides hands on experience to ways to learn and improvise command over python language

## Evaluation Scheme

The questions will cover all the chapters of the syllabus. The evaluation scheme will be as indicated in the table below.

| Chapters                                  | Hours     | Marks<br>Distribution* |
|-------------------------------------------|-----------|------------------------|
| 1.Python Introduction                     | 1         | 5                      |
| 2. Variables and Data types and Operators | 3         | 5                      |
| 3.Control Statements                      | 1         | 10                     |
| 4.Introduction to Loops                   | 5         | 10                     |
| 5.Strings                                 | 2         | 10                     |
| 6.Python Lists                            | 2         | 10                     |
| 7.Set                                     | 1         | 10                     |
| 8.Tuples                                  | 2         | 10                     |
| 9.Dictionary                              | 2         | 10                     |
| 10.Functions                              | 5         | 20                     |
| <b>Total</b>                              | <b>24</b> | <b>100</b>             |

## Eligibility of Target Participants



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For all age group students.

## Beneficiaries

- Central/State/Private Universities & Academic Institutions
- Central & State Government Organizations/Departments
- Research Institutes, industries such as space, geospatial, environment, defence, etc.

## Course Details & Fee

- What You'll Learn : Python Programming Language
- Course Fee : Free
- No. of Seat Available : 500

## Eligibility Criteria for the Course Examination & Award

- The participants with 70% attendance will be eligible for online examination.
- The schedule for online examination will be announced by ISW and all the eligible participants has to appear in online examination.
- All the participants need to submit their training feedback at end of the programme.
- The participants scoring minimum 40% score in online examination will be awarded with "Course Completion".
- The certificate will be distributed through online mode.



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## Course Study Materials

- Learning resources available in various multimedia formats such as lecture PDFs, video recorded lectures, open source software & handouts of demonstrations, etc.
- Students can also use the link : <https://indiaspaceweek.org/> and visit the student section and book section.

## For Joining the Online Course Session

- Visit the website, <https://indiaspaceweek.org/index/>
- Go to **Student** Corner and click on the **Student Panel** section  
<https://student.indiaspaceweek.org/>
- Go to **Courses** tab
- Select your **Class**
- Click **Here to Join**
- A **Pop Up** will appear that will have your **Registration ID, Institute's Name, and Course Name**
- Click on the “**Submit**” button
- Get email on your registered mail ID successfully registered

## For student query

### Contact Us

### INDIA SPACE WEEK

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