

ONLINE CSSTEAP SHORT COURSE ON

“Use of Space Technology for Weather and Climate Studies”

Organized By
CSSTEAP

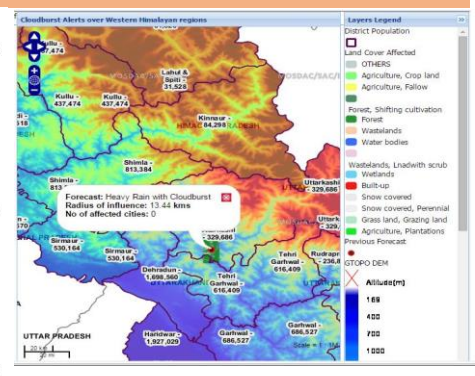
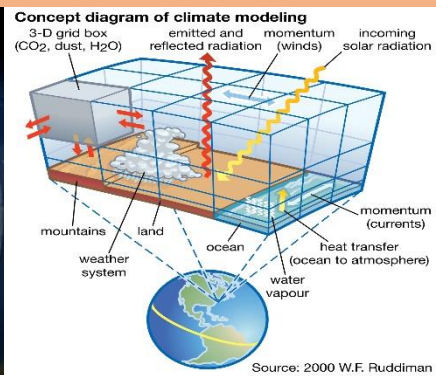
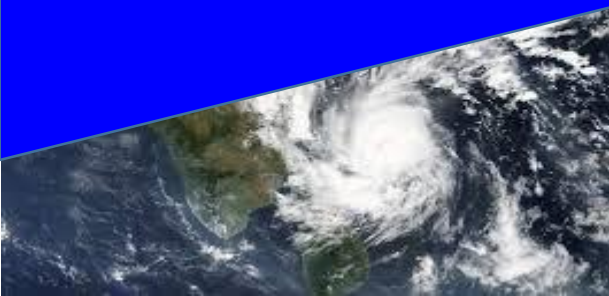
Conducted By
SAC, ISRO



Centre for Space Science and Technology Education in Asia and the Pacific (CSSTEAP)
(Affiliated to the United Nations)
IIRS Campus, 4, Kalidas Road, Dehradun, India
www.cssteap.org

Space Applications Centre (SAC)
Indian Space Research Organisation (ISRO)
Department of Space, Government of India
Ahmedabad, India
www.sac.gov.in

Online Mode
May 17 – 31, 2021



INTRODUCTION

Weather is the condition of the atmosphere at a particular place over a short period of time, whereas climate refers to the weather pattern, using statistical data, of a place over a long enough period to yield meaningful averages. Climate is an important element because it indicates the atmospheric condition of heat, moisture and circulation; it plays a dominant role in shaping vegetation and soil; and it ultimately affects all forms of life. There are many elements that make up both the weather and the climate of a geographical location. The most significant of these elements are temperature, atmospheric pressure, wind, solar irradiance, humidity, precipitation, condensation and topography. The greatest influence of climatic change is associated with not only natural, but also artificial factors, which can be measured in terms of both short-term and long-term climate change.

ABOUT CSSTEAP AND SAC

CSSTEAP was established in India in November 1995 with its headquarters at Dehradun and over the past 25 years, the center has emerged as a Centre of Excellence in capacity building in the field of space science and technology applications. The CSSTEAP programmes are executed by the faculty of Department of Space at campuses namely, Indian Institute of Remote Sensing (IIRS), Dehradun, Space Applications Centre and Physical Research Laboratory, Ahmedabad and UR Rao Satellite Centre, Bengaluru. The training programmes includes PG and Short Courses on RS & GIS, Satellite Communications, Satellite Meteorology and Global Climate, Space & Atmospheric Science, Global Navigation Satellite Systems, Small Satellite Missions and DRR regularly. Besides this many short courses, webinars, MOOC and workshops on various themes are also organized.

Space Applications Centre (SAC), one of the major centres of the Indian Space Research Organisation (ISRO), is responsible for the applications programmes of ISRO. It extensively interfaces with the actual users of satellite systems. SAC is active in R & D in the fields of Satellite Meteorology & Oceanography, Remote Sensing, Satellite Navigation and Satellite Communications

OBJECTIVE OF THE COURSE

The overall objective of the 2 weeks training course is to generate awareness among users/ researchers/ professionals /decision-makers /academicians on the basics of weather and climate and recent advances in predicting tropical weather phenomena with special emphasis on Indian Meteorological and Oceanographic satellites. The participants will be familiarized with following topics during lectures sessions: i) basic of weather and climate, ii) atmospheric motion: pressure, winds and circulations, iii) atmospheric instability, temperature, cloud formation and precipitation processes, iv) understanding of tropical weather systems cyclone, monsoon, ENSO etc., v) basics of weather forecasting and analysis, vi) space based observations for weather & climate, vii) atmospheric chemistry and climate interactions, viii) Cryospheric process and climate change, ix) modeling of water cycle and climate change and climate projections. The participants will also be familiarized with applications and uses of satellite data for weather and climate during hands-on sessions.

COURSE CONTENTS

First Week

- Introduction to Weather and Climate.
- Basics of Satellite Meteorology.
- Space Based Observations for Weather and Climate.
- Tropical Weather Systems.
- Satellite data for Cyclone tracks and Intensity Prediction
- Basics of Weather forecasting and analysis.
- Now-casting using satellite data

Second Week

- Aerosol, radiation and chemistry-climate interaction
- Use of satellite data for Weather forecasting.
- Air-Sea Interactions.
- Global Warming and Sea-level Rise
- Urban Heat Island: Causes, effect and mitigation
- Concept of Climate Modeling.
- Modeling of Water Cycle and Climate Change
- Cryospheric process and Climate Change.
- Satellite based measurement of green-house gases.

ELIGIBILITY AND HOW TO APPLY

Candidates having Master's degree in science or Bachelor's degree in engineering or equivalent qualification in the relevant field of study can apply. Applicants with at least 3-4 years of experience in teaching, research or professional experience in the field of Atmospheric Science, Oceanography, Meteorology and related fields will be given preference.

Applicants are requested to send the scan copy of their application forwarded by the Head of their respective institute for consideration. There is no course fee for applicants applying through proper channel. The course will be conducted in English

Announcement of course: March 01, 2021

Last date for submission : March 31, 2021.

The applicant should submit their application through e-mail at cssteapsatmet@sac.isro.gov.in. Incomplete application will not be considered for selection. Link of lectures will be shared with selected candidate in due course. It is mandatory for selected participants to attend all lecture sessions for successful completion of this course.

CONTACT DETAIL

For course related query candidate may contact

Dr. Sanjib K Deb

(Email: cssteapsatmet@sac.isro.gov.in; Ph: +91-79-26916108)

Atmospheric and Oceanic Sciences Group
Space Applications Centre
Indian Space Research Organization
Ahmedabad-380015,
Gujarat, India



**CENTRE FOR SPACE SCIENCE AND TECHNOLOGY EDUCATION
IN ASIA AND THE PACIFIC**
(AFFILIATED TO THE UNITED NATIONS)

**APPLICATION FORM FOR SHORT COURSE ON “USE OF SPACE TECHNOLOGY FOR
WEATHER AND CLIMATE STUDIES”**

May 17 - 31, 2021

**Conducted by
Space Applications Centre, Ahmedabad, India
(Through Online mode)**

**Last date for receipt of application: March 31, 2021
(Through e-mail: cssteapsatmet@sac.isro.gov.in)**

Affix
Recent Passport
Size Photograph

1. Name (Dr/Mr/Mrs/Miss):

2. Father's Name:

3. Date of Birth (DD/MM/YYYY): 4. Place of Birth:

5. Gender (Male/Female): 6. Nationality:

7. Contact Information: Present official Address (Valid until what date):
.....
.....

Home: Office:

Mobile: E-mail:

8. Permanent home Address (in your country):
.....
.....

Telephone: Alternate E-Mail (G-mail or Yahoo):

9. ACADEMIC QUALIFICATIONS:

Degree/(Bachelor/Master)/ Diploma	Duration of Course (mention from which year to year)	University/ Institution Name	Year of passing	Grade/ Percentage	Major subjects/ specialisation

10. DETAILS OF EXPERIENCE:

(a) Present Position:
 Organization and Complete Address.....

Date of joining this Organisation (dd/mm/yyyy):

(b) Experience during past 15 years:

Name of the Organization(s)	Position(s)/Post(s) held	Nature of work done	Duration

11. Have you done any other course from CSSTEAP (If 'yes'; please give details including the month & year)

.....

12. DETAILS OF PASSPORT: Please provide valid passport details below and if not holding a valid passport, please forward copy of the passport whenever available.

Passport Number	Place of Issue (City and Country)	Date of Issue	Passport Valid up to	Issuing Authority

13. DECLARATION BY THE CANDIDATE:

I have read the announcement brochure and the information provided in the application are correct.

Date :

Place:

Signature of Candidate

14. NOMINATING AGENCY CERTIFICATE:

Dr/Mr./Ms.....is nominated to attend the Short Course on "Use of Space Technology for Weather and Climate Studies" to be conducted by Space Applications Centre, Ahmedabad, India during May 17- 31, 2021 through webinar mode. It is envisaged to utilize his/her experience in specific tasks of our organization. He / She possesses adequate knowledge of English Language required for the course.

Date :

Place :

Signature:

Name in Capital Letters:

Designation :

Phone No :

Fax No :

Email :

(Official Seal of the sponsoring or nominating authority)

Send the scan copy of application form duly signed by Head of the nominating agency to the Course Director, CSSTEAP SATMET, Space Applications Centre (ISRO), Bopal Campus (Tech)., Bopal, Ahmedabad - 380058, Gujarat, India by through Email at cssteapsatmet@sac.isro.gov.in.