

**CSSTEAP SHORT COURSE
ON**

**“Meteorological Satellites: Physical
Principles, Retrieval and
Applications”**

**Organized By
CSSTEAP**

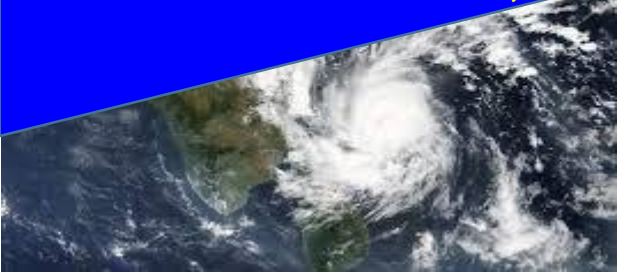
**Conducted By
SAC, ISRO**



**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
November 23 – December 05, 2020**



INTRODUCTION

Satellite Meteorology is a very promising field of remote sensing for analyzing and monitoring of weather and climate related information of the complex system earth. The invention of weather satellites has opened a new area in weather forecasting. Satellite observations enable to continuously monitor the weather as well as climate regimes on the whole globe. Therefore it provides a powerful tool in weather forecasting, climate assessment etc. Worldwide the researchers, academicians, decision makers and professionals are using techniques developed under this field for use in most important areas like agriculture, climate and atmospheric science, marine science, hydrology etc. The recent development and availability of huge satellite data, worldwide connectivity through internet, and high performance computing environment opens up new vistas for managing the natural resources of system earth.

ABOUT CSSTEAP AND SAC

The CSSTEAP was established in India in November 1995 with its headquarters in Dehradun and is considered as the Centre of Excellence by UNOOSA. The 1st campus of the Centre was established in Dehradun, India and is hosted by Indian Institute of Remote Sensing (IIRS), a constituent unit of Indian Space Research Organisation (ISRO). The CSSTEAP has been imparting training and educational programmes related to RS & GIS, Satellite Communication, Satellite Meteorology, Space Science, Global Navigation Satellite Systems, and Small Satellite Mission, helping participants in developing research skills through its Master Degree, Post Graduate and Certificate programs.

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 to recent advances in Satellite Meteorology, Physical principles, retrieval and its wide area applications with special emphasis on Indian Meteorological and Oceanographic satellites. The participants will be familiarized with basic principles of Satellite Meteorology, Space based observations for weather & Climate, techniques for retrieval of different Atmospheric & Oceanic parameters from satellite data and data analysis. The participants will also be familiarized with different applications for use of satellite data for cyclone track and intensity prediction, monsoon monitoring, Now-casting, Air-Sea interaction, Agro-meteorology, Fog monitoring, radio-occultation and hydro-meteorological disasters.

COURSE CONTENTS

First Week

- Basic Principles of Satellite Meteorology
- Space Based Observations for Weather and Climate.
- Atmospheric Sounding
- Use of Satellite data for Cyclone tracks and Intensity Prediction
- Atmospheric and Ocean Surface winds
- Sea-surface temperature from Satellite
- GPS Radio Occultation Technique

Second Week

- Now-casting using satellite data
- Applications of Satellite Data in NWP
- Applications of Satellite data in Monsoon Variability
- Air-Sea interactions
- Agro-Met Applications of Satellite data
- Hydrological Applications of Satellite data
- Applications of Scatterometer data.
- Fog monitoring using satellite data

ELIGIBILITY AND HOW TO APPLY

Candidates having the Master's degree in science or Bachelor's degree in science/ engineering or equivalent qualification in the relevant field of study, can apply for the course. The candidate should have the basic knowledge of Meteorology. Basic College level knowledge of Physics, Mathematics and / or Statistics are essential.

Applicants are requested to send the scan copy of their application forwarded by the Head of their respective institute for consideration. Since whole course will be conducted in English, the candidate should have proficiency in English language.

Announcement of course: October 12, 2020

Last date for submission : October 31, 2020.

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 any course related query, the candidates 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 IN “METEOROLOGICAL SATELLITES:
PHYSICAL PRINCIPLE, RETRIEVAL AND APPLICATIONS”**

November 23, 2020 to December 05, 2020

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

**Last date for receipt of application: October 31, 2020
(Through e-mail: cssteapsatmet@sac.isro.gov.in)**

Affix
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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:

Organisation and Complete Address.....

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

(b) Experience during past 15 years:

Name of the Organisation(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 "Meteorological Satellites: Physical Principle, Retrieval and Applications" to be conducted by Space Applications Centre, Ahmedabad, India during November 23- December 05, 2020 through webinar mode. It is envisaged to utilise 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.