



**ONLINE CSSTEAP SHORT COURSE  
ON  
“REMOTE SENSING & GIS  
TECHNOLOGY AND APPLICATIONS”**

**Organized By**

**Conducted By**



**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](http://www.cssteap.org)**



**Indian Institute of Remote Sensing (IIRS)  
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**Virtual Platform: .....  
November 16 – 27, 2020**



## INTRODUCTION

Remote Sensing (RS) and Geographic Information System (GIS) is a very promising technology for modeling, analyzing, disseminating, monitoring, planning, decision-making and management of the spatial information of the complex system earth. Worldwide the researchers, academicians, decision makers and professionals are using this technology to model almost each and every fields of life like agriculture, soil science, forestry, ecology, climate, ecosystems, water resources, urban studies, geoscience, atmospheric science, marine science, geo-hazards etc. The recent development of RS & GIS tools, 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 IIRS

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 1<sup>st</sup> 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 programmes.

The IIRS (established in 1966) is a key player for training and capacity building in geospatial technology and its applications through training, education and research in Southeast Asia. The training, education and capacity building programmes of the Institute are designed to meet the requirements of professionals at working levels, fresh graduates, researchers, academia, and decision makers.

## 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 RS and GIS technology and its wide area applications. The participants will be familiarized with principles of RS and GIS, earth observation sensors & platforms, digital image processing, Image classification techniques, GIS database creation, and spatial data analysis. The participants will also familiarized with the RS and GIS applications in the field of agriculture & soils, forest resources & ecosystem analysis, geoscience, coastal & ocean sciences, urban & regional studies, water resources, geological disasters, and hydro-meteorological disasters.

## COURSE CONTENTS

### *First Week*

- Basic Principles of Remote Sensing & GIS
- Earth Observation Sensors & Platforms
- Spectral Signatures & Visual Image Interpretation
- Digital Image Processing
- Image Classification Techniques & Separability Analysis
- GIS Database Creation and Spatial Data Analysis

### *Second Week*

- RS and GIS Applications in Agriculture & Soils
- RS and GIS Applications in Forest Resources & Ecosystem Analysis
- RS and GIS Applications in Geosciences
- RS and GIS Applications in Coastal & Ocean Sciences
- RS and GIS Applications in Urban & Regional Studies
- RS and GIS Applications in Water Resources
- RS and GIS Applications in Geological disaster
- RS and GIS Applications in Hydro-meteorological disaster

## 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 geospatial technology. Basic school level knowledge in mathematics and / or statistics is essential.

Applicants are requested register online only through the following web link ..... The applicants are advised to read each and every instruction given in the online application form carefully before applying Online.

Start date of the applications is October 5, 2020 and the deadline of online applications is October 25, 2020 (05:00 PM IST). Applicants are also advised to check the website/portal regularly for further updates/information.

## CONTACT DETAIL

**For any course related query, the candidates may contact any of the contact detail.**

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