

## ***Direct Recruited Scientist Course (Instrumentation)***

**Duration:** 6 months

**Event Format:** Offline Course

**Host:** RTC NEW DELHI, INDIA

**Language:** Hindi, English

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### **Description**

This training is conducted in two phases: the Self-Learning Phase and the Classroom Contact Phase.

**In Self-Learning Phase**, participants are engaged in self-study at their respective workplaces. Study materials for this phase are provided to candidates via the training website, and physical presence at the training centre will not be required.

**The Classroom Contact Phase** starts with an Orientation Program at ICITC, RTC New Delhi, where participants must be physically present. During this period, classroom sessions will be held to address doubts during the self-learning phase, followed by a Mid-Term Examination. This phase also includes classroom sessions, On-the-Job Training, project work, visit to an international airport site, written exams, project presentations, and a viva voce at the end.

The subjects covered during the training will include basics of measuring principal, fault identification and maintenance of various meteorological instruments and technologies as follows:

#### **Surface Instruments**

(Barograph, thermograph, hair hygograph, pressure tube anemograph, distant indicating wind equipment, Natural siphon recording rain gauge, tipping bucket rain gauge, HWSR etc).

#### **Automatic Weather Stations**

Upper Air Instruments (Radiosonde, GPS radiosonde, Wind Profiler, SODAR, Radio occultation, Dropsonde, Microwave Radiometer, Ground Equipment, Different types of Horizontal sounding etc).

#### **Aviation Instruments**

(Current Weather Instruments System (CWIS)/DCWIS, Transmissometer (Single base), Ceilometer.

#### **Environmental Monitoring Instruments**

(Ozone sonde, AOD, Precipitation chemistry, PH meter, Conductivity meter, SO<sub>2</sub>/ Nox/ TSPM measurement etc).

#### **Meteorological Radar**

Participants are expected to fully engage in both phases to maximize the learning experience. No course fees will be charged; however, foreign participants will need to cover their own expenses for boarding and lodging.

**Network Security Software, Devices & Applications, Server Management, Web Designing & Geographical Information System (GIS), Python, AI/ML, Meteorological payloads on satellite & their products**

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<b>Qualification</b>	B.Sc./ M.Sc./ B.E./ B. Tech./M.Tech/ BIP-MT or equivalent
<b>Target Audience</b>	Professionals working in their respective National Meteorological and Hydrological Services (NMHS) and involved in the operation and maintenance of observational instruments, server management, website management, and the development of GIS applications for meteorological purposes.
<b>Organizer</b>	India Meteorological Department, Ministry of Earth Sciences, Government of India
<b>Expected Outcomes</b>	Upon completing this training, participants will achieve a comprehensive understanding and practical expertise in various meteorological instruments and systems. They will be proficient in using and maintaining surface, upper air, aviation, and environmental monitoring instruments. Additionally, they will acquire skills in network security software, devices, and applications, as well as geographical information systems (GIS), server management, and web designing. Participants will also gain hands-on experience through on-the-job training, project work, and a field visits. Overall, this training will equip participants with the necessary technical skills and practical experience to excel in the field of meteorology, enhancing their ability to monitor, analyse, and manage meteorological instruments and systems effectively.