



**SEISMOLOGY -THEORY, PRACTICE
AND APPLICATIONS**
(A CSIR - Integrated Skill Initiative)

December 16-27, 2024



CSIR- NATIONAL GEOPHYSICAL RESEARCH INSTITUTE
Uppal Road, Hyderabad - 500007

**सीएसआईआर
CSIR**
भारत का नवाचार इंजन
The Innovation Engine of India



CSIR Integrated Skill Initiative

ABOUT THE INSTITUTE:

CSIR-NGRI is a premier institute in solid earth Geophysics devoted to R&D activities. The institute regularly imparts training to individuals in the field of Geophysics, especially in the area of Seismology for mapping the deep structure of the Earth, deciphering the earthquake source processes, and assessment of earthquake hazards in India and adjoining regions.

The training course would mainly focus on several facets of Seismology, particularly stressing practical training in the examination of seismograms, recognition of different seismological phases, and determination of earthquake locations. The course will include instruction on fundamental concepts of Earthquake seismology, such as seismic instrumentation, noise characterization at seismic stations, the most recent seismological software for determining earthquake locations, source parameters, focal mechanisms, modelling of subsurface velocity structures in both one and three dimensions, seismic hazard assessment, and the performance of engineering structures during earthquakes.

TARGET PARTICIPANTS:

The Programme aims to provide seismology training to students and personnel from Universities, Institutes, government Organizations, and Disaster Management Agencies in order to develop a society that is resilient to earthquakes. Furthermore, its purpose is to enhance expertise in the aforementioned specific fields and produce a substantial number of qualified seismology analysis as over 60% of the Indian landmass encounters moderate to severe ground shaking.

COURSE STRUCTURE:

The course is designed to provide experimental learning through a combination of classroom lectures, practical training on understanding ambient noise at seismic stations, site characterization, seismogram analysis, identification of various seismic phases, estimation of travel times, use of Wadati diagrams, earthquake location and relocation techniques, modelling of earthquake source parameters, focal mechanisms, and seismic

structure, and engineering applications of seismology. The lectures will primarily focus on introducing the subjects and offer hands – on instruction in their applications. The training will also include visits to field seismic stations and the CSIR-NGRI seismological observatory.

METHODS OF INSTRUCTION:

Educational approaches encompass lectures on theoretical elements supported by case studies, demonstrations of instruments, and practical training on state-of-art technology. Instruction will be conducted exclusively in English.

CERTIFICATION

Upon successful completion of the course, participants will get a certificate.

Education Qualification	A Master Degree in Geophysics or Geology Diploma/Degree or equivalent in Civil Engineering or students of the final year of respective courses.
Nationality	Indian Nationals
Duration	December 16-27, 2024
Venue	CSIR- National Geophysical Research Institute, Uppal Road, Hyderabad - 500007
Last Date for Applying	November 17, 2024, 05:00 PM
Number of Seats	30
Course Fee*	Rs. 2,500/- + 18% GST = 2950/- (for Master, Diploma/Degree students) Rs. 5,000/- + 18% GST = 5900/- (for Ph.D. Students) Rs. 10,000/- + 18% GST = 11800/- (for Faculty and Industry sponsored)
Food	Breakfast and Dinner will be available at nominal rates at the CSIR-NGRI Campus payable by the participants.
Accommodation Charges	CSIR-NGRI guest house on twin sharing basis at the rate of Rs. 300/- per head per day for the first 6 days and 7 th day onward Rs. 600/- per day per head. Skills Development quarters (Rs. 100/- per head per day) and staff quarters/research scholars' hostel (Rs. 50/- per head per day) on twin sharing basis

Course Coordinators	Dr. Prantik Mandal (e-mail: prantik@ngri.res.in) Dr. Vijaya Raghavan R (e-mail: raghavanrv@ngri.res.in)
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* Course fee includes training fee, course material, working Lunch, Tea, and Snacks. It should be paid online by the shortlisted participant