TA, Boarding and Lodging

The selected participants will be provided free boarding and lodging in the institute guest house. Food expenses will be borne by the organizers as per ICAR norms. All participants will be reimbursed to and fro travel fare for the journey to Bhopal by rail or bus by shortest route. Air travel is not allowed. The payment will be made as per the entitled class of travel, but restricted to the maximum of AC-II tier train fare/bus fare (as per actuals). Local participants are not eligible for boarding and lodging, however, they will be provided lunch and inter-session tea. Participants are requested to not to bring family members with them, as the institute has limited hostel facilities. No DA will be paid to participants.

Important Dates

1. **Last date for receipt of application: 17-12-2024**
2. **Intimation of selection of participants: 19-12-2024**

All correspondence should be addressed to

Dr. Nisha Sahu

Senior Scientist & Course Director

ICAR-Indian Institute of Soil Science

Nabibagh, Berasia Road, Bhopal-462038, Madhya Pradesh

Mobile: 08600360804

Email: Nisha.Sahu@icar.gov.in or nishasahu5@gmail.com

or

The Director

ICAR-Indian Institute of Soil Science

Nabi Bagh, Berasia Road, Bhopal-462 038, M.P.

Phone: 0755-2730946, 2730970 (O)

Fax: 0755-2733310;

Web: https://iiss.icar.gov.in

APPLICATION FORM FOR PARTICIPATION IN SHORT COURSE TRAINING

Organizing Institute: ICAR-Indian Institute of Soil Science

1. Full name (In block letters) :
2. Designation :
3. Present employer and address :
4. Address to which reply should be sent :
   Postal address with PIN
   Phone/ Mobile No. Fax No.
   E-mail
5. Permanent address :
6. Date of Birth :
7. Sex (Male/Female) :
8. Marital status (Married/Unmarried) :
9. Teaching/research/professional experience (mention post held during last 5 years and number of publication) :
10. Field of specialization and current area of research / teaching :
11. Mention if you have participated in any Research seminar, Summer/Winter School/Short Course, etc. during the previous years under ICAR/Other organization
12. Postal order No. ---------- dated ----------of Rs 50/- (non-refundable) in favour of ICAR unit IISS Bhopal for registration of application
13. Academic record :

Degree	Subjects	Year of passing	Class ranks/ distinction	University/ Institution	Other information
Ph.D.					
Post Graduation					
Graduation					

14. Recommendation of the Head of the Department/Institute

Signature & Seal

CERTIFICATE

It is certified that the information has been verified from the office record and is found correct.

Date Signature and designation of sponsoring authority

Note: Application may be sent to the Course Director of the training or to the Director, ICAR-IISS, Bhopal.

ICAR SHORT COURSE

on

Recent developments in Instrumentation techniques for assessment of soil quality

02-11 January 2025

Course Director

Dr. Nisha Sahu

Course Co-coordinators

Dr. M. Vassanda Coumar

Dr. Tapan Adhikari

Sponsored by

Agricultural Education Division

Indian Council of Agricultural Research

New Delhi-110 012

Organized by

ICAR-Indian Institute of Soil Science

Nabi Bagh, Berasia Road, Bhopal-462 038, M.P.

Phone: 0755-2730946, 2730970 (O)

Fax: 0755-2733310;

Web: https://iiss.icar.gov.in

Background

Instrumentation techniques for assessing soil quality have evolved significantly to provide accurate, efficient, and reliable measurements of various physical, chemical, and biological properties of soils. These techniques are vital for understanding soil health, guiding agricultural practices, and monitoring environmental impacts. Soil quality assessment initially relied on visual inspections, manual texture analysis, and very simple chemical tests. Basic soil parameters like colour, structure, and pH were evaluated using basic tools such as colour charts and litmus paper. By the mid-20th century, laboratory-based techniques such as spectrophotometric analysis of nutrients became common. Soil sampling and analysis protocols were standardized to ensure consistency and comparability of results. In recent days, advances in technology have led to sophisticated tools for direct and indirect measurement of soil quality indicators. Modern methodologies like time domain reflectometry, portable spectrometers, ion-selective electrodes, in-situ sensors, respirometers and DNA based sequencing for microbial diversity are used for soil assessment. Remote Sensing, geospatial techniques and IoT based systems with machine learning algorithms help for real time monitoring and processing of large datasets rapidly.

ICAR-Indian Institute of Soil Science has pioneered in various advanced and modern instrumentation techniques for soil physical, chemical and biological characteristics. It has an excellent trained faculty. The laboratories of the institute are well equipped with modern instruments. The scientific and technical staff is experienced with state-of-the-art analytical methods and techniques.

Duration of short Course

Duration of the Short Course Training is 10 days with effect from **02-11 January 2025** (both days inclusive). The participants are expected to arrive at ICAR-IISS, Bhopal latest by the evening of 01 January and can leave after 17:00 hrs on 11 January 2025.

Course Content

- Advanced technologies (GIS, GPS and RS) in identification and characterization of degraded sites
- Instrumental techniques for sample digestion and analysis (Soil, water and plant system)
- FTIR spectroscopy for the estimation of soil organic carbon quality
- Infrared spectroscopy for Rapid estimation of soil properties
- Estimation of biological parameters for soil health assessment
- Instrumental techniques for GHG emission
- Soil sampling protocol for environmental impact assessment
- Carbon footprint and energy budgeting for life cycle assessment

Eligibility

:

The officers in the cadre of Scientists / Assistant Professors / Subject Matter Specialists or equivalent and above from ICAR institutes, SAUs, CAUs, Agricultural faculty of AMU, BHU, Vishwa Bharati and Nagaland University who are actively engaged in research, teaching and extension in the areas of Soil Science, Agronomy, Microbiology, Environmental Science, Horticulture and other relevant Agriculture subjects are eligible to attend the short course training. The total number of participants will be restricted to 25. For speedy disbursement of selection letters, participants are requested to apply online at CBP portal of ICAR and provide email ID and FAX number.

Location and Climate

Bhopal, a sprawling and picturesque capital city of Madhya Pradesh, is well connected by air, rail and roadways to different parts of country. Participants travelling by train/bus should alight at Bhopal railway station/Bhopal bus stand from where taxi/ auto-rickshaws can be hired to reach ICAR-IISS Campus located near Karond Chowraha on Berasia Road at a distance of 8 km from railway station and 7.5 km from Bus Stand. The Raja Bhoj Bhopal airport is located at a distance of 10 km from the campus. The participants are advised to make their return journey reservations in advance before leaving for Bhopal. The climate during the month of January, moderate (~18°C) during day time and cool in the night (~8°C).

Application and registration

Participants are requested to apply online at CBP vortal (https://cbp.icar.gov.in/)

A. Create account on CBP vortal, if your account is not created on CBP vortal:

1. Click on 'Create New Account' link on home page.
2. Fill the form.
3. Click on 'Create Account' button. User will get the message 'Successfully created account' after account is created on the CBP vortal.

B. Login on CBP vortal:

1. Enter the 'User Id' and 'Password' in the candidate login window on the home page.
2. Click on 'Login' button.

C. Participate in training programme:

1. After login, click on 'Participate in Training' button/menu, list of trainings will be displayed.
2. Click on 'Training Title - "Recent developments in Instrumentation techniques for assessment of soil quality".
3. Click on 'Apply' link.
4. A form will open with all your personal details filled in. In case, user want to change any of these information then click on 'Edit' button and do the desired changes.
5. Click on 'Save' button to save the information then click on 'Next' button.
6. Fill the 'Academic details' and 'Experience details information. Click on 'Next' button.
7. Fill 'Draft/Postal' order for Rs. 50/- drawn in favour of ICAR unit IISS Bhopal and click on 'Next' button.
8. Advance Application form will be generated in system and click on 'print' link. Submit this print out copy in your office for approval of competent authority. Click on 'Submit' button, advance copy will be submitted to course director.
9. After approval from competent authority, upload the scanned copy of duly approved application form and click on 'Next' button.
10. Click on 'Upload Approved Application File' button to upload signed 'Advance Application form' (Approved Application Form) in pdf/ doc/ jpg/ jpeg/ docx and click on 'Submit' button for final submission.

Additionally, interested candidates may send their applications in the prescribed format duly nominated / forwarded by the competent authority to Dr. Nisha Sahu, Course Director, ICAR- Short Course Training or Director, ICAR-IISS, Bhopal.