



**APPLICATION FORMAT FOR THE PARTICIPATION IN THE TRAINING PROGRAMME**  
(Send the duly filled application form to the Course Director)

- 1, Full name (in BLOCK LETTERS) :
- 2. Designation :
- 3. Present employer and address :
- 4. Address for correspondence :
- 5. Email ID :
- 6. Date of birth :
- 7. Gender :
- 8. Professional experience (post held) during last 5 years :
- 9. Details of previous training programme availed, if any :
- 10. Academic Record

Examination	Main subject	Year of passing	Grade / %	University/Institute
Bachelor				
Master				
PhD				
Other				

Date : \_\_\_\_\_  
 Place : \_\_\_\_\_  
 Signature of the applicant \_\_\_\_\_  
Recommendations of forwarding institution

Name and Designation:

Address: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Signature & Seal

**Training programme  
On**

**Use & Maintenance of Advanced  
Instruments in Soil and Plant Analysis**



**January 22-27, 2018**

**Course Director**

**J K Saha**

**Course Co-Directors**

**M L Dotaniya, K M Hati**



**ICAR-Indian Institute of Soil Science**  
 Nabibagh, Berasia Road, Bhopal-462 038 (MP)

## Background

Soil is a vital and practically a non-renewable resource performing several ecosystem services including being a medium of plant growth. The pressure of increasing food production from the same land area has resulted over-use and misuse of this precious resource which has resulted decline in its nutrient supplying capability, soil physical condition, population and diversity of beneficial macro- and microorganisms as well as build-up of toxic contaminants leading to decline in crop productivity and produce quality. The challenges of sustaining and improving soil quality and remediating degraded/polluted soil for better agriculture has compelled ICAR to take-up frontier researches on soil related issues through various institutes along with the thrust on the development and maintenance of related instrumental facilities and human resources for carrying out these objectives. Properly trained human resources are the backbone of any research organization for maintenance of laboratory facilities and execution of high quality researches in time bound manner. Therefore, a need has been felt to improve the efficiency of technical staff employed in the laboratories responsible for carrying out soil and plant related research so that research organizations fulfill their objectives smoothly. With this background, a training module has been developed for improving the competency of the technical staff in handling and maintenance of modern instruments normally used for carrying out soil and plant analysis. We are sure technical staffs of various ICAR institutes will avail this opportunity in achieving their professional ambition.

**Dr. J. K. Saha, Course Director**

## Course Outline

The course is divided into three modules, which are further divided into topics of study:

- Module I : Laboratory Working Principle & Precautions
- Module II : Use & Maintenance of Soil & Plant analysis instruments
- Module III : Experiential Learning and Group discussion

Hands-on experience with basic methodologies of soil & plant analysis. Use & Maintenance of pH meter, EC meter, Flame photometer, Spectrophotometer, CHN analyzer, Scientific microscope, Kjeldahl N distillation system, Flow injection analyzer, TOC, Gas chromatography, HPLC, MIR spectrophotometer, TXRF, Pressure plate apparatus, Cone penetrometer, Yoder apparatus, Permeameter, Pressure chamber apparatus, IR gas analyzer, AAS and ICP-OES.

## Who Can Apply

The training programme is open for technical staff of ICAR & SAU Institutes. Master degree holders in the discipline of Agriculture/ Soil Science/ Agricultural Physics/ Agriculture Microbiology/ Microbiology/ Agronomy/ Environmental Science/ Forestry/ Horticulture and related disciplines are eligible to apply for this course. There will be no fee for ICAR employees, but a fee of Rs. 5000/- will be charged for non-ICAR employees. Maximum of 20 participants will be selected and the number of non-ICAR & SAU employees is restricted to 10, with preference being given to ICAR employees.

## How To Apply

Eligible and interested participants are requested to send their application in the prescribed format duly nominated by the competent authority to the Course Director. It should reach the Course Director before the last date by post, fax or email. The participants will be selected on the basis of their qualification and interest relevant to the training course.

## TA/DA, Boarding and Lodging

The training expenditure like TA/DA, Accommodation charges, Food charges including breakfast, lunch, evening tea and dinner has to be borne by the Institute of the participants. (As per NAARM training programme conducted for ICAR employees at NAARM). Full day food bill will be provided to each participant to get a claim from their respective Institutes. Organizing institute will provide only session tea, drinking water, study material (preferably in soft copy), and registration kit to the participants from the institute fund. Participants are requested not to bring family members with them, limited hostel facilities are available.

## Important Dates

Last date for receipt of application –January 4, 2018; Confirmation of participation – January 8, 2018.

**Correspondence:** All correspondence should be addressed to the Course Director

**Dr. J. K. Saha**

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Course Co-Directors

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*N.B. Information brochure is also available at website: [www.iiss.nic.in](http://www.iiss.nic.in). If more copies are required, typed/photostat copies may be made locally for use by the applicants.*