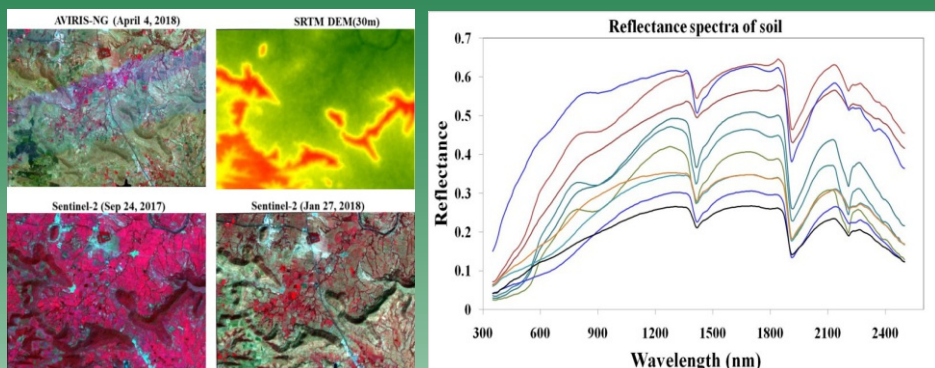


# Training Programme on Digital Soil Spectroscopy

22 - 31 July 2024



Organized by

Division of Remote Sensing Applications

ICAR-National Bureau of Soil Survey and Land Use Planning

Amravati Road, Nagpur-440 033

<https://nbsslup.icar.gov.in>

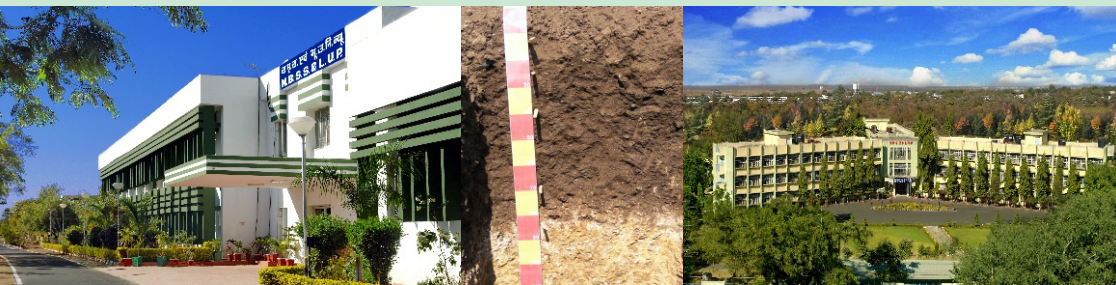
## About the Course

ICAR-NBSS&LUP is organizing training on digital soil spectroscopy for researchers involved in soil science and environmental research. This comprehensive program covers a wide array of topics essential for understanding and utilizing digital soil spectroscopy effectively. It includes introductory sessions on remote sensing and GIS to hands-on training in hyperspectral remote sensing principles and applications to provide advance knowledge and skills to the participants. Furthermore, delving into machine learning algorithms for soil variability assessment and spectral modeling of soil properties equips participants with advanced tools for predictive modeling and decision-making. The fieldwork component provides practical experience, bridging the gap between theory and real-world applications. Ultimately, the development of soil spectral libraries and project presentations not only consolidates learning but also fosters collaboration and knowledge sharing among participants. By the end of this training, attendees will be well-equipped to harness the power of digital soil spectroscopy for sustainable land management and environmental conservation efforts.

ICAR-National Bureau of Soil Survey and Land Use Planning, Nagpur is engaged in soil survey and preparation of soil-based thematic databases and maps at various scales through field surveys, soil analysis, cartography and mapping by adopting remote sensing, GPS and GIS. To meet the demand of capacity building in emerging digital soil spectroscopy, the advanced training programme on '**Digital Soil Spectroscopy**' is being organized by the Division of Remote Sensing Applications at ICAR-NBSS&LUP, Nagpur during **22-31, July 2024**.

## Course Content

- Principles of Soil Spectroscopy
- Basics of Machine Learning
- Open data and Software for machine learning
- Spectral modeling of soil properties
- Hyperspectral imaging & Spatial prediction of soil properties
- Development of soil sampling strategy
- Development of Soil Spectral Libraries



## Target Participants

This advanced training is designed especially for the working professionals from Central/ State Govt./ Universities/ ICAR Institutes/ State Departments/ Private Industry/ Organizations/NGO/ students & researchers engaged in soil mapping and agriculture and environmental planning.

## Course Fee

**Course Fee: Rs. 10,000/-** to be paid by the participants to ICAR-NBSS&LUP, Nagpur through online payment gateway. To and fro travel charges and, boarding & lodging charges at ICAR-NBSS&LUP Scientist Home/Guest House, Bajaj Nagar, Nagpur will have to be borne by the participants as per the ICAR rules & regulations. However, refreshments during the training period and training material will be provided by the host institute.

## Eligibility Criteria

- M.Sc./M.Tech. in Agriculture/Soil Science/Agricultural Physics/Soil and Water Conservation/Agri. Engg./ Hydrology/ Civil Engg./ Env. Sci./ Agric. Statistics or equivalent
- M.Sc./M.Tech. in Remote Sensing and GIS/Geography/Geology/ Geoinformatics/ Computer Science its equivalent with specialization in soil studies and agricultural applications
- Note: Candidates nominated by the Govt. organizations & professionals working in the field of Remote Sensing & GIS Applications in Agriculture will be given preference
- Applications submitted online in the prescribed format will be considered.

## How to Apply

- Interested candidates should fill the online application form through the given Google Form <https://docs.google.com/forms/d/e/1FAIpQLSdnZ3142-B6DNp2lwGG9jB11pnayz50AkTFgZKxPocMqSmZvQ/viewform>
- Selected candidates will be informed by mail.
- For any further queries write to Course Coordinator through Email.

## Travel and Accommodation

The applications invited from the interested participants for the training programme on "Digital Soil Spectroscopy" from the organizations of ICAR, SAU's, KVKs who desire to participate in the training programme, their TA/DA, lodging and boarding may be borne by their respective organization/institute. However, training materials and refreshments will be arranged by the host institute. Facilities for boarding and lording will be made available for the participants at ICAR-NBSS&LUP, Scientist Home on their own cost.

## Important Dates

- **Last date for receipt of application : 30<sup>th</sup> June 2024**
- **Confirmation of participation : 05<sup>th</sup> July 2024**

## Address for Correspondence

### Course Coordinators

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### Course Director

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### Patron

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