SKILL DEVELOPMENT TO USE SPATIAL DATA FOR NATURAL RESOURCES MANAGEMENT IN AGRICULTURE

Hands on Training on Remote sensing and GIS Software

(3rd Jan 2023 – 23rd Jan 2023)

N HEP

Centre for Advanced Agricultural Sciences and Technology

NATIONAL AGRICULTURAL HIGHER EDUCATION PROJECT COLLEGE OF AGRICULTURAL ENGINEERING, JAWAHARLAL NEHRU KRISHIVISHWA VIDYALAYA JABALPUR, MP, 482004

Project website: www.nahep-jnkvv.org

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About Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur

Jawaharlal Nehru Krishi Vishwavidyalaya established on October 2, 1964, is a forerunner university located in Jabalpur, Madhya Pradesh. The university is awarded Sardar Ballabh Bhai Patel Outstanding University Award for the year 2018 by the Indian Council of Agricultural Research, New Delhi. The university has various constituent colleges, Agricultural Research Stations, and Krishi Vigyan Kendra's. The University offers Bachelor's, Master's, and Doctoral degrees in the Faculty of Agriculture and the Faculty of Agricultural Engineering. The University also offers diploma courses of two years in "Seed Production" and "Nursery Management" at Horticulture Vocational Education Institute, Garhakota, Sagar, MP.

About NAHEP

NAHEP is designed to strengthen the national agricultural education system in India with overall objective to provide more relevant and high-quality education to agricultural university students. This programme has been promoting efficiency and competitiveness through changes in working mechanism of agricultural universities, raising the teaching and research standards through improved research and teaching infrastructure and enhanced faculty competency and commitments, and making agricultural education more attractive to talented students. There are four key components under NAHEP, namely; Institutional Development Plan (IDP), Centers for Advanced Agricultural Sciences and Technology (CAAST), ICAR to support excellence in agricultural universities (AUs), and ICAR Innovation Grants to AUs

Skill Development to use Spatial Data for Natural Resource Management in Agriculture

Objectives:

- To build basic capacity for using RS & GIS techniques applied for betterment of Natural Resource Management particularly in Agriculture and allied sectors.

- To identify appropriate techniques for integration of spatial and ground data to realize problems related to land, water and vegetation.

- To develop user friendly spatial data products using identified technologies for policymakers, researchers, field workers and farmers.

About the 21 Days Hands-on training on RS & GIS

This offline training is intended to cover the basics of RS & GIS as well as empowering participants to efficiently do the hands-on on RS & GIS software's like ERDAS IMAGINE and ArcGIS and prepare the important thematic maps which can be very useful for various agriculture planning purposes.

Address for Correspondence

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Participants

University Teachers/Faculty Members/Scientists/Technical staff/PG & PhD students are invited to participate in this offline training program for 21 days. The participants have to nominate themselves from their **Head of the Institution/ Department.**

Registration Details:

The candidates have to confirm their interest for attending the training on following link, Participants also have to upload their nomination to the given link:

https://forms.gle/vULGr6Etjx1w6atu8

In case of any difficulty in uploading the Nomination, The interested candidate can send their nomination at sdnahep@jnkvv.org .

The last date to fill this registration form will be 24 Dec 2022 at 5.30 pm. After that, applications will not be considered.

Terms and Conditions

- **Only nominated candidate will be considered for this 21-Days training program.**
- **Training seats are limited, the selection of participants will be finalized by project administration based on their eligibility and experience.**
- **NO TA/DA will be provided by NAHEP Project. The candidates will have to bear any travel cost to attend this training**

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Training Title: "21 Days- Hands on Training on Remote sensing and GIS Software"

21 Days Training Program Schedule (03-01-2023 to 23-01-2023)

Date	10.30–11.45 AM	12.00 PM– 1.30 PM	3.00-5.30 PM
03-01-2023	Registration and Inauguration Pre Assessment	Basics of Remote Sensing and its application in agriculture **Dr. R.K. Nema**	Introduction to GIS **Dr. S.K. Sharma**
04-01-2023	Satellites, Sensors, and Resolution **Er. Anjali Patel**	An introduction to different Geoportals (Earth explorer, Bhuvan, Copernicus ESA, etc.). **Dr. Sourabh Nema**	Special Lecture **Dr. P S Tiwari**
05-01-2023	Georeferencing of Map in GIS software **Dr. PS Pawar**	Generation of vector features such as Point, Line, and Polygon, **Dr. PS Pawar**	Practice s Session
06-01-2023	Process to fill data in the attribute table and area calculation. **Dr. PS Pawar**	GIS vector operations **Dr. PS Pawar**	Practice Session
07-01-2023	Introduction to Image processing **Dr. Umakant Rawat**	Downloading process of satellite images **Dr. Sumit kakade**	Practical Assignment
08-01-2023	Practical Assignment	Practical Assignment	Practical Assignment
09-01-2023	Layer stacking of different bands **Mr. Om Prakash Prajapati**	Layer stacking of different bands **Mr. Om Prakash Prajapati**	Practice Session
10-01-2023	Mosaicing of Satellite Image **Er. Anjali Patel**	Subset satellite data with AOI (Area Of Interest) **Dr. Sumit kakade**	Practice Session
11-01-2023	Lecture on Introduction to Land Use Land Cover Classification **Dr. Sourabh Nema**	Land use Land cover classification (process) **Dr. Umakant Rawat**	Practice Session
12-01-2023	Land use Land cover classification (process) **Dr. Umakant Rawat**	Land use Land cover classification (process) **Dr. Umakant Rawat**	Practice Session
13-01-2023	Land use Land cover classification (Recoding) **Dr. Umakant Rawat**	Area calculation of classified data and Accuracy assessment **Er. Deepak Patle**	Practice Session
14-01-2023	Field Visit for GPS survey **Er. Alok Rajpoot, Er. Krishna Singh, Er. Rachit Nema**	Field Visit for GPS survey **Er. Alok Rajpoot, Er. Krishna Singh, Er. Rachit Nema**	Field Visit for GPS survey **Er. Alok Rajpoot, Er. Krishna Singh, Er. Rachit Nema**
15-01-2023	Practical Assignment	Practical Assignment	Practical Assignment
16-01-2023	Introduction to Crop Map Classification **Dr. Devendra Vasht**	Crop Map Classification **Dr. Devendra Vasht**	Practice Session
17-01-2023	Crop Map Classification **Dr. Devendra Vasht**	Crop Map Classification **Dr. Devendra Vasht**	Practice Session
18-01-2023	Creation of Map layout in Arc GIS software **Er. Aniket Rajput**	Creation of Map layout in Arc GIS software **Er. Aniket Rajput**	Practice Session
19-01-2023	Introduction to Proximal Remote Sensing **Dr. Shiv Ramakrishna**	Different instrument used for spectral measurement in field **Dr. Shiv Ramakrishna, Dr. Sumit kakade, Om Prakash Prajapati**	Field visit & Practical **Dr. Shiv Ramakrishna, Dr. Sumit kakade, Om Prakash Prajapati**
20-01-2023	Introduction to Crop Yield Estimation using RS & GIS **Er. Anjali Patel**	Crop Yield Estimation **Er. Anjali Patel**	Practice Session
21-01-2023	DEM data processing **Er. Aniket Rajput**	Thematic map preparation (Elevation, Slope, Aspect, contour generation) **Er. Aniket Rajput**	Project work
22-01-2023	Practical Assignment	Practical Assignment	Practical Assignment
23-01-2023	Post Assessment	Project presentation	Feedback and valedictory

Morning Tea Time : 11.45 AM -12.00 PM
Lunch Time   : 01:30 PM - 03.00 PM
Evening Tea Time : 04.00 PM - 04.15 PM