GEOSPATIAL TECHNOLOGIES

Geospatial technologies integrate satellite remote sensing, geographic information system, global positioning system and ground based sensors for providing various information for monitoring and management of natural resources. Remote Sensing and Geographic Information System (GIS) technologies are widely used in various fields of agriculture *viz.,* Soil Resource Management, Watershed Management, Land Degradation Assessment, Monitoring and Assessment of Soil Moisture, Monitoring of in-season Agricultural Operations, Crop Inventory-Crop acreage and yield estimation, Crop stress Monitoring, Crop Damage Assessment etc. Remote Sensing and GIS are used as decision making tool for optimization of resource utilization, distribution of agricultural inputs and marketing activities.

Realizing the utility of Remote Sensing and GIS techniques, Tamil Nadu Agricultural University implemented a scheme on, 'Remote Sensing for Agricultural Applications' in 1990. It was functioning as a unit in the Department of Soil Science and Agricultural Chemistry and was established as a separate department in 2010 by involving the scientists of various disciplines for wider application of Remote Sensing and GIS techniques in the areas related to agriculture. This department is well equipped with photo and visual interpretation facilities (light table & stereoscope), Digital Image Processing & GIS lab with workstations installed with ARCGIS labkit, ERDAS, IDRISI and GeoMedia RLL, cartographic equipments, ground truth collection equipments like survey grade and navigation GPS handsets, multispectral ground truth radiometer and VIS-NIR Hyperspectral Spectroradiometer, server for Internet Map Services using ArcGIS IMS, Remote Sensing and GIS teaching and training laboratory, multimedia projector and analytical laboratory equipped for soil, water and plant analysis.

The training programme on "Geospatial Technologies in Agriculture" is sponsored by Natural Resource Data Management System (NRDMS), Dept. of Science and Technology, Government of India and being organized by the Department of Remote Sensing and Geographic Information System, Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu.

OBJECTIVES

- To impart training to professionals working in the area of natural resource management on geospatial data collection, creation of geodatabase, analysis and management, output generation and reporting
- To demonstrate the applications of geospatial technique for efficient planning and management of natural resources.
- To create awareness among different user-group on the potentials of various geospatial technologies.

COURSE OUTLINE

- Geospatial sciences: What, why and How?
- Introduction to data types in geospatial information - Data sources
- Scales and projections – data quality – map making
- GPS – concepts and components
- Principles of remote sensing – spectral signature – sensors and platforms in remote sensing
- Fundamentals of aerial photography – Visual interpretation
- Preprocessing of digital data – Atmospheric and Radiometric correction - Georeferencing
- Digital image processing – Image classification – vegetation indices – change detection
- GIS – spatial data analysis, map algebra, overlay, geostatistical analysis – spatial variability map generation
- Introduction to PostGRE/PostGIS – Geoserver – Catalogue services
- Applications - crop acreage and condition assessment – land use / land cover mapping — soil resource mapping - land degradation – watershed delineation – drought assessment.

FACULTY / RESOURCE PERSONS

- Expertise is available at TNAU for imparting training on geospatial techniques for natural resource management
- Experts from other Universities / ICAR institutes / ISRO centres will be involved in the training programme.

ELIGIBILITY

Scientists/ Assistant Professors/ Associate Professors from ICAR Institutes/ State Universities/ Central Universities/ Engineering/ Technical Institutes and Officers from Central/State Govt. in the discipline of Agriculture, Horticulture, Agricultural Engineering, Forestry/ Land Resource Management/ Remote Sensing & GIS/ Geography and other subjects having relevance of using remote sensing and GIS in Natural Resource Management.

VENUE

Department of Remote Sensing and GIS
Directorate of Natural Resource Management
Tamil Nadu Agricultural University
Coimbatore – 641 003

TRAVEL

Participants will be paid travel fare to and fro for journey by III tier AC (except Rajdhani) / by Bus whichever is less by producing valid travel ticket.

ACCOMMODATION

Free boarding and lodging will be arranged for the participants in the guest houses available in the University campus.

LOCATION AND SEASON

Coimbatore, located near the picturesque Western Ghats is famous for Cotton Textiles, Engineering Industries, Agricultural Research and Education and sweet Siruvani drinking water. The weather at Coimbatore during September - October will be pleasant.

TRANSPORT

Coimbatore city is well connected by Road, Rail and Air to all major cities in India.

APPLICATION AND SELECTION

The participants are requested to send the filled in application forms **through proper channel** to the following address by post. Advance copy can be sent by email.

Dr. R. SIVASAMY
Professor and Head and Course Coordinator
DST Training on Geospatial Technologies
Department of Remote Sensing and GIS
Tamil Nadu Agricultural University
Coimbatore - 641 003.

Telephone	:	0422-6611368 / 2445066
Mobile	:	9790033933 / 9789982772
E-mail	:	rsgis@tnau.ac.in
URL	:	http://sites.tnau.ac.in/rsgis

Last date for receipt of application through the sponsoring Institute is 20.08.2015

Candidates will be informed of their selection latest by 31.08.2015

APPLICATION FORM FOR PARTICIPATION IN TRAINING PROGRAMME

1. Full Name (in block letters) :

2. Designation :

3. Present employer and address :

4. Address to which communications should be sent (provide email, phone & mobile number) :

5. Date of Birth :

6. Sex : Male / Female :

7. Teaching / Research/ Professional experience (mention post held during last 5 years and number of publications) :

8. Field of specialization and current area of research / teaching :

9. Mention if you have participated in any Summer / Winter School/ Short Course, etc. during the last 3 years. :

10. Academic record

Examination passed	Subjects Main / subsidiary	Year of passing	Class/ rank / distinctions	University or Institution
Bachelor's degree				
Master's degree				
Ph.D				
Other certificates, diplomas, degree etc.				

Place …………..

Date :……………   Signature of the applicant

Recommendations of the Sponsoring Authority:

Date:
Place:

Signature & Designation of the sponsoring authority with office seal

For Further Details Please Contact:
Dr. R.Jagadeeswaran - Course Director,
DST Training on Geospatial Technologies
Department of Remote Sensing and GIS
Tamil Nadu Agricultural University, Coimbatore-641 003
Mobile: 9790033933
Email: jagawaran@tnau.ac.in

DST TRAINING PROGRAMME ON

GEOSPATIAL TECHNOLOGIES

September 30 – October 20, 2015

Sponsored by

Natural Resources Data Management System (NRDMS), Department of Science & Technology Govt. of India, New Delhi

Organized by

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