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SHORT TERM COURSE ON “FREE & OPEN SOURCE GEOSPATIAL TECHNOLOGIES (FOSS4G) FOR NATURAL RESOURCES MANAGEMENT” 22-25 AUGUST 2019

Introduction: The course is being offered under Alva's- EWRG, IISc Research initiative for capacity building. The demand for spatio-temporal data analysis has gained momentum with the government's push for digital India. There is lack of professionals in these disciplines, particularly of those with a vast knowledge of the practical utilization of these technologies. This necessitates knowledge augmentation of in-service professionals particularly of teaching faculty in colleges and universities.

Course Objective: Knowledge augmentation (advancements in spatial informatics, remote sensing data analysis, modelling and Geo Visualisation) for in-service professionals

Course Contents

Geographical Information Systems: Introduction, Historical development, from the real world to GIS, basic data models, Geo-references and co-ordinate systems, basic spatial analysis and modeling, GIS implementation and project management, GIS issues and prospects.

GIS Perspectives: Environmental research, the state of GIS for environmental research, the state of GIS for environmental problem-solving, GIS and environmental modeling.

Understanding the scope of FOSS4G: Its relationship to environmental modeling and natural resources management.

Data models and data quality: problems and prospects.

GIS in environmental modeling: Hydrological modeling, urban dynamics, biological/ecological modeling, disaster management and risk modeling.

Principles of Remote Sensing: Spectral characteristics of earth's surface, spatial data pre-processing, classification, accuracy assessment, land use land cover analysis, change detection, biophysical modeling.

Remote sensing and GIS integration: Applications to resources inventorying, monitoring and management. Ground truth data. Digital image processing image classification.

Concept of environment: Economic benefits of remote sensing the geographical uses of remote sensing, sensors for environmental monitoring.

Applications of Remote Sensing: Water in environment in environment, soil and landforms, urbanization, design of Smart Cities, Ecology, Conservation and resource management, Land/land cover dynamics, Urban sprawl analysis, Hazards and disasters, Coastal zone management.

Case studies would highlight the application of these concepts in natural resources management.

Selected participants would learn basic concepts of GIS, remote sensing data classification, integration of remote sensing information with GIS, database development and if time permits spatial data modelling and geo-visualisation, geo-server, etc.

Lectures: Lectures will be delivered by Institute faculty members (selected participants need to bring laptop)

Eligibility:

The course is meant for the youth (students from educational institutions and professionals)

Those who wish to register for the course, needs to send email (copy of CV) to:

Dr. T V Ramachandra tvr@iisc.ac.in;
CC to veenacivilarun@aiet.org.in

Course fee may be paid at the venue of the Sort Term Course or by demand draft drawn in favour of 'Alva's Institute Of Engineering & Technology' payable at Moodbidri

Fees

Faculty: 2000 INR

Government Agencies: 5000 INR

Industry Participants: 5000 INR

Students : 1000 INR

They will be entitled to participate in the course and receive the course material (e version). Accommodation (payment basis) is available at Alva's Moodbidri. The participants have to request in advance (send mail to Dr. Veena: veenacivilarun@aiet.org.in (subject to availability of accommodation)

Co-ordinator

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Last Date to Apply:
16 August 2019

Intimation of Selection:
18 august 2019

Course Faculty
T V Ramachandra
Bharath Settur
Vinay s
Karthick Naik
Vinayaka Bhatta

