

**A. I. C. T. E – SPONSORED NATIONAL LEVEL  
STAFF DEVELOPMENT PROGRAMME  
on  
Geomatics for Water and Environmental Technologies  
(GWET - 2009)  
(19<sup>th</sup> - 31<sup>st</sup> October, 2009)**

Sponsored by



*All India Council for Technical Education, New Delhi*

*Coordinator*  
**Dr. M.V.S.S. Giridhar**

*Organized by*



**Centre for Water Resource,  
Institute of Science and Technology,  
J N T University Hyderabad, Hyderabad – 500 085  
Andhra Pradesh, INDIA.**

### **ABOUT JNTUH, HYDERABAD**

Situated in the heart of the city at Kukatpally a major landmark- Jawaharlal Nehru Technological University, Hyderabad has an environment of academic excellence with 'A' Grade accreditation by NAAC (National Assessment and Accreditation Council). Bringing the spark of knowledge to young minds and instilling a new confidence and vigour to face the world, it is providing quality education for nearly 4 decades. A premier institution with academic and research -oriented courses, the B.Tech programs (Undergraduate programs) are about 25. Major branches among them are Aeronautical Engineering, Automobile, Biotechnology, Information Technology, Electronics, Electrical, Instrumentation & Control, Metallurgy, Mechanical, Bio-medical, Civil and many more. A few courses are also offered through the correspondence cum contact mode. The Post-Graduate programs form about 77 in number namely M.Tech, MSIT, MBA, MCA and MSc. The major branches are Bio-Technology, Chemical Engineering, Civil Engineering, Remote-Sensing & GIS, Electronics & Communication Engineering, Water Resources, Mechanical Engineering, Nano-Technology, Energy Systems, Environmental Studies, Microbiology, Food-Technology and many more like Management, Computer Applications, Pharmaceutical Sciences etc.

### **ABOUT CENTRE FOR WATER RESOURCES (CWR), IST, JNTUH, HYDERABAD**

The Centre for Water Resources (CWR) which forms a part of the Institute of Science and Technology, JNTUH Hyderabad was established in the year 1984 with the funding from the then Ministry of Education and Culture, Government of India to impart training in the management of water resources at an advanced level and to undertake research and developmental activities in the field of water, land and environmental management and other related areas. Since then the Centre has acquired a reputation among user agencies like State and Central Government Departments and other public sector and private organisations as an apex body for imparting training and undertaking field oriented research projects in water and environmental management. In the past decades the activities of the centre has been greatly diversified and is concentrated on water and environment for sustainable development. Central Public Health Engineering and Environmental Organization (CPHEEO) has recognized this centre as one of the renowned institutes offering P.G. courses in water and environment. Research projects were taken up in many areas of Water Resources and environment at National and International levels. The centre is well known for its technical excellence and modern infrastructure facilities such as latest version of software and highly sophisticated instruments.

### **ABOUT HYDERABAD**

Hyderabad, a 400-year old city, is the capital of State of Andhra Pradesh, India. The city presents an attractive amalgamation of ancient architecture, together with the ebullience of growth and enterprise of the modern world. Hyderabad, often called The Gateway of The South, blends the north and south Indian identities. The city of Hyderabad is famous for its minarets and its pearl bazaar. Hyderabad is at an altitude of 536 m above Mean Sea Level and is a seat of number of Research and Development Organizations of national and international importance besides being a host for half a dozen Universities. During the course period the Hyderabad will be experiencing winter days with day time temperature around 30°C and night time temperatures will be around 15° C.

## **IMPORTANT DATES:**

- 1. Last date for receipt of applications** : 08<sup>th</sup> October, 2009
- 2. Intimation to the selected candidates through e-mail** : 10<sup>th</sup> October, 2009

## **REGISTRATION:**

The staff development programme is offered to a limited no of participants (20) on first come first served basis. Selected teachers will be paid TA to the limit of sleeper class train fare by the shortest route from the place of work to Hyderabad and back. **No registration fee** for the course.

**Accommodation:** Accommodation will be provided in the campus guest house to outstation participants and working lunch will be provided at the course venue.

## **OVERVIEW OF THE COURSE:**

The objective of the two week SDP is to provide a forum for presenting and discussing the latest trends in the areas of RS, GIS and GPS applications for Water and Environmental Management. Remote sensing (RS), Geographic Information System (GIS) and Global Positioning System (GPS) provides extremely useful tools for environmental and water resources management. They are widely recognized as supporting tools for the planning, monitoring, development and management of the appropriate utilization of resources at micro to macro level. Various tools, which can be applied to address water and environment related problems and the role that the professionals can play in managing water and environment in their respective areas would be discussed.

### **Course Content:**

- Fundamentals of Remote Sensing and Geographical Information System.
- Radiation – Water interactions, spatial extent of water bodies.
- Basics principles of Remote sensing principles, GIS and GPS
- Satellite image analysis and DEM creation.
- Hydrological Parameter Determination, using GIS such as surface slope, channel length and soil characteristics of watersheds.
- Rainfall-runoff modeling
- Evapotranspiration mapping using GIS.
- Evaluation of land use and land cover changes and its effect on environment.
- Geo-Hydrology & Groundwater Modeling.
- Soil Erosion and Control practices.
- Flood management and flood risk management.
- Integration of RS and GIS for water resources management.
- RS and GIS application for environmental management.
- Hands on practical training on Arc GIS 9.1 and ERDAS 8.7.
- **Lectures: lab sessions: 60:40**

**Faculty:** Resource Persons are drawn from NRSA, GIS India, SOI, NGRI, OU, AU, NIT's, IIT's, JNTU and experts from Institutions and Industries.

**Venue:** CWR Seminar Hall,  
Fifth Floor, IST Building,  
JNTU Hyderabad,  
Kukatpally, Hyderabad-500 085

**MAILING ADDRESS**

All correspondence should be addressed to

**Dr. M.V.S.S. Giridhar**

Coordinator, GWET - 2009

Centre for Water Resources,

Institute of Science and Technology (IST)

JNT University Hyderabad,

Kukatpally, Hyderabad - 500 085

Mobile: 09440590695

e-mail: [mvssgiri@yahoo.com](mailto:mvssgiri@yahoo.com)

[www.cwr.org.in](http://www.cwr.org.in)

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**REGISTRATION FORM**

**(Please mail the filled in form to reach us on or before 8<sup>th</sup> October, 2009)**

**Name and designation:**

**Address for Communication:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Telephone:**

**E-mail:**

**This is to certify that Sri/Smt \_\_\_\_\_ is permitted to attend the staff development programme on GWET - 2009 to be held during 19<sup>th</sup> – 31<sup>st</sup> October, 2009 at CWR, IST, JNTUH, Hyderabad.**

**Accommodation required: YES/NO**

**Signature of the applicant**

**Signature of the forwarding authority**

**Station:**

**Date:**

**(Photocopies of this form may be used)**