

## Rationale

One thing which is increasing at much faster rate than the population of the country and the world, is Infrastructural Challenge. To meet the ever increasing and much varied infrastructural needs of urban and rural habitation involved in varied professional practices like agriculture and industries, there is an urgent need to improve the speed of infrastructural development, make it more sustainable by improving its quality and to manage the widespread execution of large projects. The necessity become more urgent by complexity of transportation of people and goods. Another challenge is water security, which is showing new dimensions under the unprecedented climate change across the world.

To make the design and execution faster and reliable, more and more software and modern tools are being employed for analysis and design. In summary, conducting training on catalyzing civil infrastructure growth through modern technologies is useful to ensure that professionals are equipped to adapt to industry changes, drive innovation, and deliver sustainable and resilient infrastructure projects for the future.

## Programme Outcomes

- 1. Awareness of National and global trend of Infrastructure growth
- 2. Advanced Data collection methods and their utilization through different tools
- 3. Hands-on Experience of modelling and analysis software
- 4. Modern techniques for Structural stability
- 5. Application of PLAXI 3D in Geotechnical Engineering
- 6. Ground Water Mapping using GIS
- 7. Project Management through software and networking
- 8. Hydraulic Modelling by integrating GIS and HEC-RAS

# **Programme Content**

- •Scenario of Infrastructural growth
- Project Management
- •Structural strengthening by modern techniques
- •Advanced Data Collection method for Traffic Studies
- •Structural Modelling for Infill Wall Effect
- •Pioneering approach of Cathodic protection of Steel Reinforcement in structures

# Target Group

Faculty of all disciplines

# Coordinator & Co-Faculty

Dr. A.K. Jain Professor

Department of Civil and Environmental Engineering Education akjain@nitttrbpl.ac.in

Expert



National Institute of Technical Teachers' Training and Research (NITTTR) (Deemed to be university under distinct category), Ministry of Education, Government of India, Shamla Hills, Shanti Marg, Bhopal-462002 (M.P.)