

**A TEQIP III**

**Sponsored**

**One-week Short Term Training Programme (Online)**

On

**“Design of Water Related Infrastructures for  
Smart City”**

July 27 - 31, 2020

Under

Centre of Excellence (CoE) on “Water Resources  
and Flood Management”

**Coordinator**

**Dr. P V Timbadiya**

**Dr. P L Patel**

**Call for participation**



**Organized by**

**Civil Engineering Department  
Sardar Vallabhbhai National Institute of  
Technology, Surat-395007, Gujarat, India.**

### **About the Institute**

The institute was initially established as Sardar Vallabhbhai Regional College of Engineering & Technology in 1961, and was upgraded as National Institute of Technology (SVNIT) in 2002. The SVNIT, at present, is one of the prestigious engineering institutions of the country, and has contributed many outstanding engineers in India and abroad. At present, the Institute is offering 6 UG Programmes, 18 PG Programmes and 3 M.Sc. Five Years Integrated Programme including doctoral programme in 6 branches. Special attention is being given in developing the culture of interdisciplinary and collaborative research. The institute has an excellent placement record with a number of top-ranking companies visiting the campus every year.

### **About the Department**

Department of Civil Engineering came into existence in the year 1961. The department has 26 faculty members with specialization in various themes of Civil Engineering. The Department has been running one UG programme in Civil Engineering, four PG programmes (Water Resources Engineering, Environmental Engineering, Urban Planning, and Transportation Engineering & Planning) and the research programmes leading to Ph.D. degree in different areas of specializations. This department is having 13 faculties as Professors, 6 faculties as Associate Professors and 7 faculties as Assistant Professor.

### **About Centre of Excellence**

The Water Resources Engineering section of the department had full-fledged facilities for UG/PG and PhD programmes under the leadership of eight dedicated faculty members. The section has taken lead to establish Centre of Excellence (CoE) on ‘Water Resources and Flood Management’ being funded from World Bank under TEQIP-II. The CoE aims to develop excellent computational and experimental facilities in the area of Hydraulics and Water Resources; develop Early Warning System for flooding in Surat city; and organize short term training programmes on thematic areas to the academicians and practitioners in the field. The coordinators of the present training programme are involved in the design of water related infrastructure

for first smart city of India, i.e., Dholera Special Investment Region (DSIR).

### **About Computational Hydraulics Laboratory (CHL)**

The Water Resources Engineering section of the department had full-fledged Computational Hydraulic Laboratory with following professional softwares:

- 1) Bentley Storm CAD, Sewer GEMS, WaterGEMS and Hammer (All latest Connect Editions)
- 2) MIKE 11/MIKE 11 GIS/MIKE 11 FF
- 3) MIKE 21- FM & SM
- 4) MIKE FLOOD/SHE/URBAN
- 5) River CAD Professional (HEC-RAS)
- 6) HEC-2
- 7) HEC-HMS Professional
- 8) Arc GIS 10.6
- 9) ERDAS IMAGINE 10
- 10) STATISTICA 10
- 11) MATLAB 2014a

The training programme is planned in the Computational Hydraulics Laboratory (CHL) to use the facility available for hands- on training during the course.

### **About Surat**

The Surat city, situated on the bank of river Tapi, is highly ranked industrial city of the country with a network of flyovers and clean wide roads. It is well known worldwide for textiles, Zari and Diamond industries. Several large scale industries and establishment are located in the city. The city is situated on the main western railway route, between Vadodara and Mumbai. The institute is located at Ichchhanath on Surat-Dumas road at a distance of about 10 km from the Surat railway station.

### **Course Objectives**

The course is aimed for engineering professionals, municipal/government engineers, engineering institute teachers and research scholars working in the area of design of water related infrastructures for the smart city. At the end of the course, the participants of the course

should be able to design and analyse the storm water network, sewerage network, water distribution network, and water hammer in pipe networks for the urban area and able to make conditional assessment of the existing network using modern softwares i.e.; Bentley StormCAD, Bentley SewerGEMS, Bentley WaterGEMS and Bentley Hammer in Indian and international context. Also, the participants should understand the impact of the climate change on the urban storm water network and its implications on the present storm water network design.

### Course Contents

The broad outline of the course is as follows:

#### 1) Storm Water Drainage Network

- o Development of IDF curves
- o Flood Estimation Practice in India
- o Basic concepts of Storm water network
- o Hydraulics of storm water drainage as per CPHEEO recommendations
- o Design of storm drainage network for Smart city using SewerGEMS

#### 2) Sewerage Network Design

- o Hydraulics of sewerage network as per CPHEEO recommendations.
- o Design of sewerage network for Smart city using SewerGEMS

#### 3) Water Distribution Network

- o Hydraulic Principles and Design considerations of the Water Distribution Network as per CPHEEO guidelines
- o Hands-on training of Design of Water Distribution Network using LOOP
- o Design and analysis of Water Distribution Network for the given demand as per CPHEEO guidelines using Bentley WaterGEMS

### Eligibility of Participants

The training programme is open to engineering professionals, field engineers, teachers from engineering colleges (both degree and polytechnic colleges) and Research Scholars/PG Students working in said area.

### Registration Fees

The programme is conducted through online mode. The registration fees for the program shall be Rs. 1000/- for field engineers and Rs.500/- for faculties from engineering colleges and research scholars and Rs. 200/- for the PG students. The registration fee should be sent in the form of a DD in favour of “**Director SVNIT, TEQIP IRG**” payable at Surat. In case, if a candidate is not selected for the training programme, the DD will be returned at the address provided in the registration form. The number of participants for the programme is limited to 30 on first come first serve basis.

### Programme Faculty and Dates to remember

Apart from the co-ordinator, field engineers and representative of Bentley softwares are likely to deliver their expert lectures and hands-on training. The registration form may be submitted through mail to [ns90tnau@gmail.com](mailto:ns90tnau@gmail.com) or as a hard copy on or before July 22, 2020. The list of selected applicants will be displayed on the institute website by July 24, 2020.

### Contacts

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### Student Coordinator

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under  
**Technical Education Quality Improvement Programme (TEQIP-III)**

Name: \_\_\_\_\_  
Gender (M/F): \_\_\_\_\_  
Category: (Faculty/Field Engineers/Research Scholar)

College: \_\_\_\_\_

Qualification: \_\_\_\_\_

Experience: \_\_\_\_\_

Address for correspondence: \_\_\_\_\_

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\_\_\_\_\_

Phone/Mobile: \_\_\_\_\_

Email: \_\_\_\_\_

Bank draft details:

Amount: \_\_\_\_\_ Draft No: \_\_\_\_\_

Drawn On \_\_\_\_\_

Date: \_\_\_\_\_

Place: \_\_\_\_\_

Signature of Participant

Signature of Head of the institution with Seal