

### 1.0 Overview

Elements of transportation-based technologies have been deployed for decades including Intelligent Transportation Systems (ITS). These technologies provide various applications and user services to ensure automated, safe and efficient transportation system. The Intelligent Transportation Systems (ITS) can be defined as the application of advanced information and communications technology to surface transportation. The technology used in high-tech, automated, connected vehicular world are deployed in three different levels namely, vehicle level, infrastructure level and cooperative level. At vehicle level, technologies are developed to use within a vehicle such as sensors, information processor and wireless communication, interactive displays, warning and cruise control system which provide instant information to drivers and automatically control a vehicle. It enables vehicle to vehicle communication and cooperative operations. Infrastructure level uses common tools such as vehicle sensors on road, dynamic messages sign, optical beacon, signal to direct traffic flow etc. They provide various information/warnings to drivers for getting advance control and safe manoeuvre. At the cooperative level, communication is provided between the vehicles and between infrastructure and vehicles. It involves a synergic combination of vehicle level and infrastructure level technology and makes it more advanced and useful to the users. The technology helps in ensuring safe mobility and conveyance for providing smart traffic and transportation management for the cities.

### 2.0 Objectives

The primary objectives of the course are as follows:

- Expose opportunities to participants in understanding and learning advanced development of technologies under Intelligent Transportation system.
- Create new knowledge of highly automated and connected vehicular environment for smart cities.
- Recognize emerging technologies for implementation of safe, efficient and automated traffic and transportation system in India.

### 3.0 International Faculty

**Dr. Edward J. Seymour**, who will be the international faculty for the course, has over 35 years of relevant experience in transportation engineering and operations. He is an Executive Associate Director at the Texas Transportation Institute. He is the head of Transportation Operations Group. The programs affiliated with the Transportation Operations Group include: connected and automated vehicles, intelligent transportation systems (ITS), traffic sensor technology, traffic management, integrated corridor and system operations, traffic signal operations, work zone safety, traffic safety, traffic signs and markings, geometric design, railroad-highway grade crossings, professional development, and implementation offices located in urban areas. Dr. Seymour also served on the Steering Committee for the LINK Alliance Collaboration with the University of Michigan Transportation Research Institute (UMTRI) and TTI.

A few recent projects in the technology space where Dr. Seymour has participated include the following:

- Task Leader for the Inter-state 10 Western Connected Freight Corridor Concept of Operations. The development of an I-10 connected freight corridor ConOps is the first step in realizing an integrated corridor management system for commercial vehicle operations moving along I-10 from the Ports of Long Beach and Los Angeles to the Port of Houston and all points between. The overall objectives of this project include the development of a framework that could lead to the harmonization of transportation standards across state lines, and facilitating successful deployment of technologies and applications for commercial vehicle movement along the corridor.
- Team Leader, Intelligent Transportation Systems (ITS) Strategic Plan for the State of Texas, Texas Department of Transportation, Identified worldwide trends in ITS technologies including connected and automated vehicles systems. Project assessed the impacts of technologies on mobility, safety, and economic competitiveness. Worked with state and local agencies, technology companies, and deployment contractors to build a consensus on the ITS strategic plan.

### 4.0 Who can participate?

This program is open to the Faculty, M.Tech students and scholars working in the areas of Traffic/Transportation Engineering, ITS and Smart City projects from various institutes. Traffic Engineers working in industries, consultancy firms, R&D labs can also participate.

### 5.0 How to Register?

**Stage-1: Web Portal Registration:** Visit: <http://www.gian.iitkgp.ac.in/GREGN/index> and create login User ID and Password. Fill up the blank registration form and do web registration by paying Rs. 500/- online through Net Banking/Debit/Credit card. This provides the user with life time registration to enroll in any number of GIAN courses offered.

### Stage-2: Course Registration:

Login to the GIAN portal with the user ID and Password already created in Step 1. Click on Course Registration option at the top of Registration form. Select the Course titled **“Transportation in a High Tech, Automated, and Connected Vehicle World”** from the list and click on save option. Confirm your registration by clicking on **Confirm Course**.

### Registration Fee

Faculty	Rs. 2,000/-
Participants from Industry/ Research Organizations	Rs. 5,000/-
Students & Scholars	Rs. 1,000/-
Participants from abroad Students Faculty /Scientists	USD 50 USD 200

The Registration fee includes instructional materials, laboratory use and session teas. The out stationed participants will be provided with boarding and lodging on additional payment of Rs. 2,000/- in Visitors Block on sharing basis.

## 6.0 Selection and Mode of Payment

Selected candidates will be intimated through e-mail. They have to remit the necessary course fee to the Bank as per the details given below.

Outstation participants requiring accommodation and boarding facilities have to pay Rs.2,000/- in addition to the course fee.

Account Name	GIANNITW
AccountNo.	62447453600
Bank	State Bank of India
Branch	REC Warangal (NITCampus)
BranchCode	20149
IFSC	SBIN0020149
MICRCode	506002030
SWIFTCode	SBININBBH14

Candidates registering early will be given preference in short listing process

For any queries regarding registration of the course, please contact the Course Coordinators.

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## 7.0 About GIAN Course

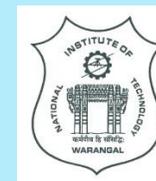
MHRD, Government of India has launched an innovative program titled "Global Initiative of Academic Networks (GIAN)" in higher Education, in order to garner and transfer the best international experience to Indian audience. As part of GIAN, internationally renowned academicians and scientists are invited to augment the Country's academic resources, accelerate the pace of quality reforms and elevate India's scientific and technological capacity to global excellence.

## 8.0 About the Institute and Warangal

National Institute of Technology, Warangal (NITW) formerly known as RECW is the first among thirty one NITs, set up in 1959. Over the years, the Institute has established itself as a premier Institution in imparting technical education of a very high standard, leading to B.Tech, M.Tech and PhD. degrees in various Engineering streams and Masters and PhD degrees in Sciences, Computer application and Management. Warangal is known for its rich historical and cultural heritage. It is situated at a distance of 140 km from Hyderabad. Warangal is well connected by rail and road. The nearest airport is located at Hyderabad. National Institute of Technology, Warangal is a fully residential campus located 3 km away from Kazipet railway station and 12 km away from Warangal railway station.

## 9.0 About the Department

One of the oldest departments of the Institute, the Department of Civil Engineering functions since the inception of the institute. The Department of Civil Engineering offers B.Tech programme in Civil Engineering, 7 M.Tech programmes including Transportation Engineering and PhD programmes. The department is a recognized QIP centre since 1978. The department has well established and well equipped laboratories. The Department has experienced faculty engaged in teaching, research, capacity building activities and industry extension services. Faculty members represent several policy making and professional bodies. The Department has excellent liaison with reputed industries and R&D organizations.



**A Five Day GIAN Course on**

**TRANSPORTATION IN A HIGH TECH,  
AUTOMATED AND CONNECTED  
VEHICLE WORLD**

**September 16 - 20, 2019**

**Call for Registration and Participation**

**International Faculty**

**Dr. Edward J. Seymour, PhD, PE**

Executive Associate Agency Director  
Texas A&M Transportation Institute, USA

**Course Coordinators**

**Prof. CSRK Prasad**

**Dr. Arpan Mehar**

**Transportation Division**

**Department of Civil Engineering**

**National Institute of Technology Warangal**

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