

# TWO WEEKS ONLINE FACULTY DEVELOPMENT PROGRAMME (FDP)

ON

## GLOBAL NAVIGATION SATELLITE SYSTEMS

(01<sup>st</sup>– 12<sup>th</sup> August, 2022)

Organized by

**E & ICT Academy, National Institute of Technology, Warangal.**

In association with

**Department of Electronics and Communication Engineering**

**Indian Institute of Information Technology Design and Manufacturing, Kurnool – 518007,  
A.P., India**



### Preamble

"Electronics & ICT Academy" was set up at NIT Warangal with financial assistance from MeitY, GoI. The jurisdiction of this academy is Telangana, Andhra Pradesh, Karnataka, Goa, Puducherry and Andaman & Nicobar Islands. This academy role is to offer faculty development programmes in standardized courses and emerging areas of Electronics, Information Communication Technologies, training & consultancy services for Industry, Curriculum development for Industry, CEP for working professionals, Advice and support for technical incubation and entrepreneurial activities.

### About FDP

Global Navigation Satellite Systems (GNSS) are play a key role in day-to-day activities of our life in finding position and navigation in the form of Societal, Personal and Commercial applications. This course will provide the awareness of the Global, Regional and Local Navigation systems and their usage for many applications. This course also provides detailed information related to applications like Health, Transport, Agricultural etc. with demonstration in the form of workshop. This course also explores awareness of IRNSS and GAGAN system and their functioning

This program will discuss theoretical and practical aspects related to GNSS, which are of interest for practicing engineers, academic personnel, research scholars and PG level students who are working in the areas of Navigation Systems. This program will provide a Hands-on Experience to all the delegates remotely on all aspects of GNSS technology.

### Major Course Contents (40 Hours)

- **GNSS FUNDAMENTALS, SIGNALS, AND SATELLITES:** Fundamentals of Global Navigation Satellite Navigation, Regional Navigation Systems, GNSS Interoperability: Frequency Compatibility, GNSS Signals, Navigation Data Messages
- **INERTIAL NAVIGATION:** Inertial-Frame Navigation Equations, Earth-Frame Navigation Equations, Local-Navigation-Frame Navigation Equations, Navigation Equations Precision, Platform INS,
- **TERRESTRIAL RADIO NAVIGATION:** Point-Source Systems, Loran, Instrument Landing System, Urban and Indoor Positioning,
- **FEATURE MATCHING:** Terrain-Referenced Navigation, Sequential Processing, Batch Processing, Performance, Laser TRN, Barometric TRN, Sonar TRN, Image Matching, Scene Matching by Area Correlation
- **INS/GNSS Integration:** Integration Architectures, System Model and State Selection, Measurement Models, Advanced INS/GNSS Integration.

### Faculty conducting this FDP

The programme will be conducted in online mode by the faculty member from IIITDM Kurnool Dr.K.Krishna Naik, Assistant Professor(Grade-I), Electronics and Communication Engineering department as a primary speaker. Speakers from industries are also expected to deliver as part of the course for applications

### Eligibility

The programme is open to faculty and PhD students of Engineering Colleges, Degree Colleges and other allied disciplines in India. Industry personnel working in the concerned /allied discipline can also attend.

### Registration Fee

<b>Faculty and Research Scholars</b>	<b>Rs. 750/-</b>
<b>Industry Participants</b>	<b>Rs. 2250/-</b>

The registration fee is to be collected in the form online transfer only using the following details:

Online Transfer Details	
Account Name	: Electronics & ICT Academy NITW
Account No	: 62423775910
IFSC	: SBIN0020149
Bank and Branch:	State Bank of India, NIT(REC) Warangal

### How to apply

1. Pay the registration fee as mentioned in the above table.
2. Fill the online registration form using the link/Qr code given below:

**Registration Link:**

<https://forms.gle/jpFpFocg1pGrnhcCA>

**QR Code:**



3. Selection will be done based on first-come-first-serve basis to a maximum number of 150.
4. Candidates will be issued satisfactory certificates on successful completion of the course.

### About NIT Warangal:

National Institute of Technology, Warangal is the first among 17 RECs setup as joint venture of the Government of India and the state government. Over the years the college has established itself as a premier Institute imparting technical education of a very high standard leading to the B.Tech degrees in various branches of engineering, M.Tech. and Ph.D programs in various specializations. All B. Tech and M. Tech programmes of NIT Warangal are NBA accredited. The Institute is well known for its dedicated faculty, staff and the state-of-the art infrastructure conducive to a healthy academic environment. The Institute is constantly striving to achieve higher levels of technical excellence. Evolving a socially relevant and yet internationally acceptable curriculum, implementing innovative and effective teaching methodologies and focusing on the wholesome development of the students are our concerns.

### About IIITDM Kurnool:

Indian Institute of Information Technology Design and Manufacturing, Kurnool (IIITDMK) was announced in 2014 after receiving the assent of President of India to the Institutes of Information Technology Act, 2014, and its subsequent publication in the Gazette of India, Extraordinary, Part- II, Section I, on December 08, 2014. The institute was announced by Government of India to give effect to its obligation under the Andhra Pradesh reorganization act 2014. The IIITDM Kurnool campus is located far away from the bustling life of the metropolis in the mineral-rich mountain trails of the Rayalaseema region of Andhra Pradesh. The campus is situated atop a hill that oversees Kurnool city. The place offers a perfect environment to nurture a peaceful state of mind required to carry out research and other student activities.



### About Department:

The department of Electronics and Communication is considered as one of the best departments of IIITDM Kurnool as the department has expertise in teaching and conducts research in the multidisciplinary areas related to VLSI Design and Embedded Systems, Wireless Communication, Electric Drives, Signal Processing, Sensors & Instrumentation, RF and Microwaves, and other related areas.

The department of Electronics and Communication Engineering offers B.Tech in Electronics and Communication Engineering with specialization in Design and Manufacturing, M.Tech in Electronics System Design, and Ph.D programmes in the relevant areas of the department.

Department has established a state-of-art laboratories Like VLSI and Embedded Systems, Electronic Drivers, Electronic Devices, Communications, RF and Microwaves. These laboratories are equipped with advanced instruments and software to fulfill all needs of experimentation and research in the area of Electronics and Communication Engineering. Faculty of this department are pioneering in the Sponsoring Research, Consultancies and Publications in niche areas of the Electronics and Communication Engineering.

### Organizing committee:

#### Chief Patron:

**Hon'ble Prof. DVLN Somayajulu**  
Director

Indian Institute of Information Technology  
Design and Manufacturing, Kurnool  
Jagannathagattu Hill, Dinnevarapadu Village,  
Kurnool – 518007, A.P., India

#### Head of the Department:

**Dr. M.A.Basiri**  
Assistant Professor(Grade-I) and  
Head Department of Electronics and  
Communication  
IIITDM Kurnool, A.P., India

#### Coordinator and Speaker:

**Dr. K.Krishna Naik**  
Assistant Professor(Grade-I)  
Department of Electronics and Communication  
IIITDM Kurnool, A.P., India

**Contact details: +91-8275203259**

**Email Id: [krishnanaik@iiitk.ac.in](mailto:krishnanaik@iiitk.ac.in)**

**For more information visit: [www.iiitk.ac.in](http://www.iiitk.ac.in)**



## Two Weeks online Faculty Development Program

On

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(01<sup>st</sup>– 12<sup>th</sup> August, 2022)

Sponsored by

**Ministry of Electronics  
and  
Information Technology (Meity), GoI**  
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Design and Manufacturing, Kurnool – 518007,  
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(An Institute of National Importance under Ministry of Education, Govt. of India)

### Important Dates

Start date of online registration	15 <sup>th</sup> March, 2022
Last date of online registration	30 <sup>th</sup> April, 2022
Selection list by email	01 <sup>st</sup> May, 2022
Duration of the FDP	17 <sup>th</sup> – 27 <sup>th</sup> May, 2022