



**FACULTY DEVELOPMENT PROGRAMME (FDP)**  
**ON**  
**5G WIRELESS COMMUNICATION**  
(29<sup>th</sup> May - 3<sup>rd</sup> June 2019)

**Organized by**  
**E & ICT Academy & Department of ECE, NIT Warangal**  
(Sponsored by Ministry of Electronics and Information Technology (MeitY), GOI)

**Preamble:**

"Electronics & ICT Academy" was set up at NIT Warangal with financial assistance from MeitY, Gol. 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 the FDP :** This FDP aims at providing strong theoretical background along with practical experience in the field of 5G wireless Communication. In 5G Wireless Communication; leaders in the field describe state-of-the-art research in applying the latest methodologies in the context of tomorrow's most important wireless applications, ranging from next-generation cellular telephony and personal communication services, to nomadic computing and wireless multimedia.

Representatives of industries and academia have started to look into the technological developments toward the next generation (5G), as the rollout of 4G mobile communication networks take place. mm wave communication, Software Defined Radio, HetNets, algorithms and architectures have an increasing important role to play in meeting the central challenges faced in the design of advanced wireless communication systems. The 5G technologies aim to support broadband data rate more than 5 Gbps, latency less than 1 ms for high mobile users and high energy efficiency. In this FDP, we will discuss the technologies that are being proposed for 5G communication.

**Major Course Contents:**

- 5G introduction, and its key features
- Modulation & Multiple Access Waveforms
- mm wave communications
- SDN – Software Defined Networking
- HetNets
- Resource allocation in 5G networks
- 5G Architectures
- Antenna technologies used in 5G
- Hands-on Experience
- Mini Projects using MATLAB and Free open Source software

**Eligibility:**

The program is open to the Faculty of Engineering Colleges, MCA Colleges and other allied disciplines in India. Industry personnel working in the concerned /allied discipline can also attend.

**Faculty conducting this programme:**

The programme will be conducted by the faculty members from NIT Warangal; Academicians in the concerned field from IITs/NITs/IIITs are invited to deliver lectures in the programme. Speakers from industries are also expected to deliver as part of the course.

**Registration Fee Particulars:**

Faculty and Research Scholars	Rs. 2500/-
Faculty of SC/ST Category	Rs. 1875/- (SC/ ST participants should submit the copy of their caste certificate to claim the concession along with application form)
Industry Participants	Rs. 7500/-

**SC/ST concession is only for faculty members. Research Scholars are not eligible for SC/ST concession.**

The entire registration fee is to be collected in the form of DDs/online transfer using the following details:

DD Details	Online Transfer Details of NEFT
Demand Draft in favor of "E & ICT Academy, NIT Warangal" payable at any bank in Warangal	Account Name: Electronics & ICT Academy NITW Account No: 62423775910 IFSC: SBIN0020149

**Accommodation:**

All the selected participants will be provided FREE boarding & lodging in the institute guest house. No TA will be paid for the participants

**How to apply:**

A filled in form of application in the prescribed format duly signed and sponsored by appropriate authorities (along with NEFT receipt/demand draft) should reach the coordinator by speed/registered post. It is also mandatory to send scanned application form and NEFT receipt/demand draft through e-mail to [kalpana@nitw.ac.in](mailto:kalpana@nitw.ac.in) and [rpandya@nitw.ac.in](mailto:rpandya@nitw.ac.in) as selection will be intimated only through mail.

**Selection Criteria:**

Selection will be done based on first-come-first-serve basis to a maximum number of 50 (fifty). Additionally 10 participants from industry are allowed to participate. The list of selected participants will be intimated through e-mail. In case a candidate is not selected, the DD will be sent back. Candidates will be issued satisfactory certificates on successful completion of the course. Reservations are followed for selecting candidates as per GOI norms.

**Important dates:**

Last date (Application & DD)	24/5/2019
Selection List by E- mail	26/5/2019
Duration	29/5/2019 to 3/6/2019

**About NIT Warangal & Department:**

**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 Department of Electronics and Communication Engineering offers an Undergraduate program in Electronics and communication Engineering and three Postgraduate programs in EI, VLSI, and ACS Specializations. The Department has experienced faculty and well-established laboratories. The Department has liaison with reputed industries and R&D organizations like DRDO, ISRO ECIL, Analog Devices Bangalore and C-DAC. Department conducts various sponsored programmes throughout the year.



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1. Name :
2. Designation :
3. Institution :
4. Email :
5. NEFT/DD No:      Bank:      Date:

Amount:

6. Address for Correspondence:

**SPONSORSHIP CERTIFICATE**

Dr. /Mr. /Ms. .... is an employee of our Institute/Organization and is hereby sponsored to participate in the FDP on **"5G Wireless Communication"**, sponsored by Electronics & ICT Academy during 29<sup>th</sup> May – 3<sup>rd</sup> June, 2019 at NIT Warangal.

Signature of Head of Institution  
(with seal)

7. Educational Qualification:
8. Subjects taught so far:

**Address for correspondence**

*Post your application form with NEFT receipt/ DD to*

**Dr. Kalpana,  
Assistant Professor  
Department of ECE,  
National Institute of Technology Warangal,  
WARANGAL - 506 004, Telangana State, India.**

9. No. of refresher courses/workshops attended:
10. Experience (in years):  
Teaching:      Research:      Industry:

***E-mail the scanned copies of filled-in and duly signed application form along with NEFT receipt/DD to [kalpana@nitw.ac.in](mailto:kalpana@nitw.ac.in) and [rpandya@nitw.ac.in](mailto:rpandya@nitw.ac.in)***

11. Accommodation required:      YES / NO
12. Do you belong to SC/ST :      YES / NO

(If yes, please specify and attach a copy of caste certificate to claim the concession)

*For more details about Electronics & ICT Academy, NIT, Warangal, please visit: <https://nitw.ac.in/eict>*

For more enquiries please contact:

**Mobile: 9393941144 and 07428335049**

**Declaration**

The information provided is true to the best of my knowledge. If selected, I agree to abide by the rules and regulations of the FDP and shall attend the course for the entire duration. I also undertake the responsibility to inform the Coordinator in case, I am unable to attend the course.

Signature of the Applicant

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**Coordinators**

**Dr. Kalpana Naidu,  
Assistant Professor  
Department of ECE,  
National Institute of Technology Warangal,  
WARANGAL - 506 004, Telangana State, India.**

**Dr. Rahul Jashvantbhai Pandya  
Assistant Professor  
Department of ECE,  
NIT - Warangal,  
WARANGAL - 506 004**