

## About SNIST

Sreenidhi Institute of Science & Technology, (SNIST) was established in 1997 with the approval of All India Council for Technical Education, New Delhi, Government of undivided Andhra Pradesh and is affiliated to JNTUH, Hyderabad.

It is running a number of under graduate and post graduate programmes and is also engaged in research activity leading to Ph.D. Sreenidhi is recognized by Department of Scientific and Industrial Research as Scientific and Industrial Research Organization(SIRO). The institution was accredited by NBA of AICTE within 5 years of its existence. It has received World Bank assistance under TEQIP Phase I and Phase II and attained autonomous status and it is the first college under JNTUH to get such on autonomous status.

The faculty of SNIST is actively involved in R&D activities and the results of such research activity have been published. SNIST has several research projects funded by different sponsoring organizations.

### Programmes and activities

- 11 UG and 5PG courses in Engineering
- M.B.A.
- R&D and Consultancy

### About ATAL Academy

AICTE Training and Learning (ATAL) Academy is established with the vision "To empower faculty to achieve goals of Higher Education such as access, equity and quality". AICTE is committed to the development of quality technical education in the country by initiating various schemes launched by Govt. of India, Ministry of Human Resource Development. Council understands that there is a need to train the young generation in the skill sector and have faculty & technicians be trained in their respective disciplines.

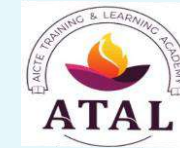
## About ECE Department

The department of Electronics and Communication Engineering (ECE) was established in the year 1997- 98. The Dept offers B.Tech, M.Tech.(DSCE), Programs. The ECE Dept B.Tech program has been accredited thrice by NBA. M.Tech (DSCE) program also accredited by NBA.. JNTU has recognized the ECE Dept as Research Center for Ph.D Programs.

All the laboratories in ECE Dept are well equipped with state of the art facility to impart quality education and support research activities. The Labs are also equipped with Vivado system design suite and Cadence (Front end and Backend tools), 7 Series FPGAs and Zed Development Boards are used for design and verification of VLSI Designs. Digital MATLAB, CCS, Keil vision, Vx works CDMA / GSM simulation, ANSYS etc. The Dept has highly qualified and broad mix of senior faculty members with wide experience in various fields of academics as well as Industry.

R&D activities of the Department are focused in the fields of Advanced Communication, Digital design and Signal processing, Image Processing, VLSI design, Embedded Systems Wireless Communication and Sensor networks, etc. ECE department has got R&D projects from AICTE, UGC, RCI, DRDO, TScost and Murata Singapore ltd and other research organizations of worth Rs 76 lakhs. ECE department also received grants of Rs 22 lakhs from AICTE for FDP and Modernization of labs.

ECE department is enriched with 27 doctorates and most of the faculty members have registered for Ph.D programs and engaged in pursuing research, publishing papers, conducting faculty development activities along with imparting Education to UG and PG Students.



## ONE WEEK NATIONAL LEVEL AICTE TRAINING AND LEARNING (ATAL) ACADEMY PROGRAM

Faculty Development Program  
On

**"5G Wireless Networks"**  
11<sup>th</sup> to 16<sup>th</sup> November, 2024

**Coordinator**

**Dr.S.P.V.Subba Rao**  
Professor and Head, ECE Dept

**Co-Coordinator**

**Dr.Ramaswamy.T**  
Associate Professor, ECE Dept



**Organized by**

**Department of ECE, SNIST**  
**Sreenidhi Institute of Science & Technology**  
**(An Autonomous Institution)**  
**Yamampet, Ghatkesar,**  
**Hyderabad-501 301**



## Objectives of the FDP

5G Wireless Networks workshop aims to provide an interactive platform on latest trends in 5G, the core essentials of current research evolutions enabling faculty to widen their spectrum of knowledge and formulate socially acceptable and economically viable solutions for the challenging requirements in the field of science and technology

The goals of 5G networks are to achieve data rates in excess of 10 Gbps, supporting dense connectivity of up to 1 million sensors per square kilometer, and ultra-low latencies lower than a millisecond. These technologies enable the realization of several new applications such as V2V (vehicle-to-vehicle)/ V2X (vehicle to infrastructure) communication, augmented/ virtual reality (AR/ VR)

### Objectives

- To understand evolving 5G technologies and key elements of 5G technology.
- Describe the 5G Core Architecture and Design
- Implementation of 5G Networks and protocol testing using open source tools
- Illustrate Machine learning in 5G and applications of 5G

### Outcomes

- To better understand evolving 5G technologies and Role of 5G in current scenario
- To familiar with the key elements of 5G technology-such as Massive MIMO, Millimeter (mm) Wave MIMO, Non-Orthogonal Multiple Access (NOMA), Filter Bank Multi-Carrier (FBMC)
- To understand Modulation and coding in 5G
- To learn about Heterogeneous Ultra Dense networks in 5G
- To understand Channel modeling and estimation for 5G
- To learn 5G Core Architecture and Design

- To better understand the applications of ML in 5G.
- To learn Protocol testing for 5G Networks using open source tools.
- To understand 5G IoT network .

### Resource Persons :

1. Mr .D.S Rao, RailTel, Hyderabad
2. Dr G Mallikarjuna Rao, Scientist G, RCI DRDO, Hyderabad.
3. Dr J Chatopadhyay, Professor, VNR VJIT, Hyderabad.
4. Mr Nithin Sharma, Senior Director, Technology council. Qualcomm
5. Mr .Srinivas Raju. K, Director, skillscad technologies, Hyderabad.
6. Dr. Sachin Chowdhary, Associate Professor, IIIT ,Hyderabad.
7. Mr.Chiranjeevi , Technical Manager, 5G technologies pvt Ltd, Hyderabad
8. Dr S.P.V SubbaRao, Professor and Head, ECE Dept, SNIST, Hyderabad.
9. Dr.Krishna Samalla, Professor and Associate- Head, ECE Dept, SNIST.
10. Dr. Ramaswamy T, Associate Professor, SNIST, Hyderabad.
11. Dr T.Swapna ,Assistant Professor SNIST, Hyderabad
12. Mr P Pradeep, Assistant Professor, ECE Dept, SNIST, Hyderabad

### Participant for Eligibility for attending FDP

Assistant Professors/Associate Professor/  
Ph.D. Scholars/PG students from AICTE approved Institutions.

### Mode of Delivery: Offline

### Registration Information

Registration must be through ATAL portal  
<https://atalacademy.aicte-india.org/>

### No Registration Fee

### Important Dates

Last date for apply : 26/10/2024  
FDP Shortlisted participants : 29/10/2024

Guidelines of AICTE ATAL FDP Scheme for selection and certification will be followed.

### Requirement to get Certificate :

Candidates would be eligible to receive a certificate up on achieving at least 70% cumulated weightage in the following aspects in the weightage mentioned.

1. Attendance - minimum 80% attendance essential. 100 % attendance - (individual) - weightage 20%
2. One assessment, - combination of MCQs/short answer type/reasoning based, etc. - (Individual) - weightage 10%
3. 2 Page Article Summary/per Team - (Team & Individual) - - weightage 30%
4. Output of practical sessions -(Individual)- weightage 15 %
5. Report/outcome of Industrial visit- (Team) at the last session - weightage 10%
6. Reflection Journal - (Individual) - at the last session - weightage 15%

### Organizing Committee :

#### Chief Patron

**Dr. K. T. Mahhe**  
Secretary, SNIST, Hyderabad  
**Sri.K.Abhijit Rao**  
CEO, SNIST, Hyderabad

#### Patrons

**Dr.T.Ch. Siva Reddy**  
Principal, SNIST

#### Coordinator

**Dr. S. P. V. Subba Rao**  
Professor and HoD, Dept of ECE, SNIST

#### CoCoordinators

**Dr Ramaswamy.T**  
Associate Professor, Dept of ECE, SNIST

#### Contact Information

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