

### About the Institution:



G.Pulla Reddy Engineering College is the brainchild of Late Sri G.Pulla Reddy, (popularly known as Sweets Pulla Reddy in A.P.) the renowned philanthropist and a great humanist. Established in 1984-85, it is one of the earliest private engineering colleges in Andhra Pradesh state. GPREC has been functioning as an autonomous institution since 2006. The college is being managed by G. Pulla Reddy Charities trust, Hyderabad. The trust was instituted by late Sri G.Pulla Reddy Garu in 1975 with the motto of rendering service to the society. The trust has established many educational institutions, hospitals, orphanages, respite homes and other social welfare organizations in various parts of Andhra Pradesh State. G.Narayanamma Institute of Technology & Science (GNITS) - Hyderabad, G.Pulla Reddy College of Pharmacy - Hyderabad, G.Pulla Reddy Dental College - Kurnool are some of the other institutions being managed by this trust.

### About the Department:

The Department of Electronics and Communication Engineering was started in July 1985. The Department has excellent infrastructure facilities, laboratories and experienced faculty. In addition, the department offers PG Programme in VLSI & Embedded Systems.

The Department has MOU with CRANES Software International Ltd. Hyderabad, CoreEL Technologies, Cadence Tools, Xilinx Tools, PCB design machine. The Department is recognized as research Centre by JNTUA to offer full-time Ph.D. Programme.

The Department is continuously undertaking the research, development and training activities in emerging technologies for students and faculty. To provide training and introducing new innovative courses based on the industry demands, the department is collaborating with National and International Institutes, R & D Organizations Software and Hardware Industries.

### AICTE Training and Learning (ATAL) Academy



ALL INDIA COUNCIL FOR TECHNICAL EDUCATION

Sponsored

One Week Faculty Development Programme (Online Mode)

On

**LAB ON CHIP**

**26<sup>th</sup>- 30<sup>th</sup> December, 2020**



Organized by:

**Department of Electronics and Communication Engineering**

**G.Pulla Reddy Engineering College (Autonomous): Kurnool**

Nandyal Road, Kurnool-518007, Andhra Pradesh

Website: [www.gprec.ac.in](http://www.gprec.ac.in)

### **AICTE Training & Learning (ATAL) :**

The ATAL academy was established on 24th September 2018 with the objective to plan and help in imparting quality technical education in the country, and to assist technical institutions in advancing research, innovation, and entrepreneurship through training. The Academy stresses upon empowering technical teachers and technicians using Information and Communication Technology. It also aims at utilizing the SWAYAM platform and other resources for the delivery of the training. The academy provides a variety of opportunities for training and exchange of experiences, such as workshops, orientation, learning communities, peer monitoring, and other FDPs.

### **Important Dates:**

Last date of online registration: **22/12/2020**  
Intimation to participants: **24/12/2020**

### **Eligibility:**

The faculty members from Electronics & Communication Engineering and related disciplines from AICTE approved institutions, Research Scholars, Industry PG Scholars, Staff of host institute eligible to apply. The number of

participants is limited to 200 and will be selected in compliance with the guidelines.

**Registration:** There will be no Registration Fee for this FDP. Interested Participants can Register using the following Link

<https://atalacademy.aicte-india.org/signup>

### **Test & Certificate:**

Test will be conducted for each complete session and digital certificates shall be issued to those participants who have attended the program with a minimum of 80% attendance and scored a minimum of 60% in the tests. The participants are also required to submit feedback for each session using the feed back link that will be provided to them.

### **Objectives of the FDP:**

Lab on Chip (LOC) is an emerging technology in the field of VLSI led to the development of miniaturized devices from computer chips to communications devices such as smart phones. Lab-on-a-chip research can be considered a subset of MEMS (microelectromechanical systems), and contains many components that came out of MEMS research. One of the greatest advantages to the lab-on-a-chip is its small size, which allows for mass production and a reduced need for expensive substances sometimes necessary for certain types of lab

work. In the not-so-distant future, lab-on-a-chip systems may even be integrated into familiar devices such as laptop computers, allowing chemistry and biology students to play with scientific tools outside the traditional confines of the lab environment. The main challenge to development of lab-on-a-chip devices is the design and fabrication of devices on a very small scale which are functional and cost-effective. In recent years, advances in materials, and in micro- and nanofabrication techniques, have allowed a number of lab-on-a-chip type devices to be built and tested.

"Lab on Chip (LOC) " FDP, aims at providing an opportunity for Faculty, Researchers to enhance the practical knowledge about the latest technologies in the field of Very Large Scale Integrated (VLSI) Circuits i.e. working with nanometer technology.

### **FDP Out comes:**

- Participants can understand real time RTL design and issues.
- Participants can develop real world Memory I.C. layout
- Participants can observe and deduce Nanometer technology

## Topics

- Introduction to Lab on Chip (LOC)
- VLSI Backend Design Flow
- Basic Experiments Using Nanometer Technology
- Chip Layout for the basic designs
- Medium Scale IC design in Nanometer technology
- Layout for the Medium IC designs.
- Real time memory design using nanometer technology
- Lab on Chip for Memory design i.e. I.C. Layout for Memory

## Speakers:

Subject experts are from premier and top design Companies like Cadence Design Systems, MOSCHIP etc.

## Chief Patron

Dr.B.Sreenivasa Reddy

Principal,

G.Pulla Reddy Engineering College(A)

## Patron

Dr. S.Nagaraja Rao

HOD, ECE Department

## Co-Patron

Dr. K. Suresh Reddy

Professor & Dean

ECE Department

## Coordinator

Dr. Shaik Saheb Basha

Professor

ECE Department

## Co-Coordinator

Sri. M.M.S. Reddy, Asst. Professor

ECE Department

## FDP Organizing Committee:

Dr.G.Eranna, Professor

Dr.P.A.Khayum, Professor

Dr.S.M.S.Daula, Associate Professor

Sri.T. Thammi Reddy, Associate Professor

Dr.S.Vyshali, Associate Professor

Dr.R.Sudheer Babu, Associate Professor

Dr.G.Amjad Khan, Assistant Professor

Sri.G.Ramesh, Assistant Professor

Sri.L.L.Prasanna Kumar, Assistant Professor

Sri.D.Sarath Babu Rao, Assistant Professor

Smt.M.Chaitanya, Assistant Professor

Sri G.Pavan Kumar, Assistant Professor

Sri.T.Naresh, Assistant Professor

## Contact Details:

Sri.M.M.S.Reddy,

Assistant Professor,

Department of ECE,

GPREC, Kurnool

Mobile No: 8332028884

Mail ID: [msreddym11@gmail.com](mailto:msreddym11@gmail.com)

Sri.G.Pavan Kumar

Assistant Professor,

Department of ECE,

GPREC, Kurnool

Mobile No: 9618393967

Mail ID: [pavangudipati.20@gmail.com](mailto:pavangudipati.20@gmail.com)