

**FACULTY DEVELOPMENT PROGRAM
ON**

***Hands-on Approach for
Design and Implementation of
Lab-on-Bread Board- A Blended
Learning***

21st - 25th , July 2021

ORGANIZED BY

Department of
Electronics and Communication Engineering
&
Electrical and Electronics Engineering



The National Institute of Engineering, Mysore,
Karnataka- 570008

SPONSORED BY



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VENUE

Online mode

REGISTRATION LINK

https://bit.ly/NIE_FDP21

IMPORTANT DATES

Last date for Submission: **15.07.2021**
Intimation of selection: **18.07.2021**
Confirmation by Participants: **20.07.2021**



ABOUT THE COLLEGE

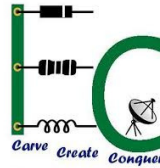
The National Institute of Engineering (NIE) is a grant-in-aid institution and approved by the All-India Council for Technical Education (AICTE), New Delhi. It was established in 1946 and granted autonomy in 2007 from Visvesvaraya Technological University. NIE got autonomous status from Visvesvaraya Technological University, Belagavi in 2007. It is one of the 14 colleges in Karnataka that has been recognized under the MHRD-World Bank-sponsored Technical Education Quality Improvement Program (TEQIP) in all three phases. All the Departments of NIE are recognized as Research Centre under VTU and AICTE for QIP. Currently, NIE offers 7 UG and 12 PG programs.



LOCATION

The National Institute of Engineering is located in Mysore, Karnataka, India. Mysuru is a tourists paradise and a heritage hub with the largest palace in India- The Amba Vilas Palace. Mysuru is a potpourri of culture, traditions, art and festivals. Mysuru is known world wide for the magnificent 10 day Dasara celebration, where culture meets art, sport and food. NIE is encompassed with all the amenities. With a thriving student community from across the country, the college has a multicultural ecosystem that welcomes every student walking in.

ABOUT THE DEPARTMENT



The Department of Electronics and Communication Engineering established in the year 1971 with Bachelor's degree in "Electronics and Communication Engineering". The Department of ECE at NIE has been at the forefront of pioneering research and education in its field. The department is a trailblazer in the Internet of Things (IoT), being the first to offer an academic course on the subject strongly supported by a full-fledged laboratory set up with generous contributions from its alumni. Collaborations with leading industry players to design and deliver the curriculum, strong presence in the research field, a well-informed and published faculty, innovations encompassing integrated laboratories, use of open-source tools and industry-driven projects, and internship opportunities are pathways that this NBA-accredited department creates to help you realize the future you dream of.



The Department of Electrical & Electronics Engineering established in the year 1958 with Bachelor's degree in "Electrical & Electronics Engineering", is one of the first few departments at The National Institute of Engineering, Mysuru. The department made a humble beginning in 1958 with only four staff members and two laboratories housed in an area of about 900 sq. mts. In the silver jubilee year of the institute in 1971, a postgraduate program leading to a master's degree in "Power Systems" was started. In the year 1987, the department was recognized as a research Centre to carry out Ph.D. program.

ABOUT THE FDP

The aim of this FDP is to impart the design and implementation of various circuits and its applications and also covers various topics which will be very useful for faculty members, researchers and professionals. Hands-on session on various open-source simulation tools namely TINA and LogicSim enables the participants to do the experiments in open-source simulators. After completion of this FDP, participants will be able to demonstrate the concept of each circuit and also able to conduct online lab sessions for the students effectively.

COURSE CONTENTS

- Basics of Electronic measurements and Instrumentation
- Basic analog circuit design
- Hands-on sessions in TINA simulator tool
- Applications of analog circuits
- Basic digital circuit design
- Hands-on session in LogicSim simulator tool
- Industrial applications
- Yoga & Meditation

TARGETED AUDIENCE

Faculty/Research Scholars from Universities/ AICTE recognized Institutions and from Industry are only eligible.

GUIDELINES

No participant fees will be collected. The total number of participants is strictly 200. Eligible participants will be selected based on a first come first serve basis. Do online registration by AICTE portal only. The program will be conducted through an online platform. A test will be conducted at the end of the program in the form of a quiz. Those who have an attendance of a minimum of 80% and score more than 60% in the test will be issued a digital certificate by the ATAL Academy.

SCHEDULE

21/07/2021

10.00 AM-11.30 AM

Registration & Introductory
Talk

Expert: Dr. Ashok Rao

11.45 AM - 1.15 PM

Session 1

Familiarisation of TINA, design tool. Familiarisation of
measuring instruments: PS, DMM, Scope and Signal
Generators

Expert: Prof. S.M. Narasimhan

2.30 PM - 4.30 PM

Session 2

Topic: Introduction to Circuit design, Thevenin's and
Norton equivalent circuits

**Experts: Prof. S.M. Narasimhan, Dr. Yajunath
Kaliyath**

22/07/2021

10.00 AM-11.30 AM

Session 3

Topic: Basic Analog circuit design
Diode Applications, Clipper, Clamper, FWR,
BWR, Zener diodes

Expert:

Prof. S.M. Narasimhan

11.45 AM - 1.15 PM

Session 4

Topic: Advanced Circuit design and applications,
OPAMP circuits: Filter Design, Oscillators, waveform
generators and industrial applications

Expert: Dr. Yajunath Kaliyath

2.30 PM - 4.30 PM

Session 5

Topic: Hands-on session (Analog)

Diode Applications, Clipper, Clamper, FWR, BWR, Zener
diodes, Characterisation of Transistor, MOSFET, SCR,
OPAMP circuits

Experts: Prof. S.M. Narasimhan, Dr. Yajunath Kaliyath

23/07/2021

10.00 AM-11.30 AM

Session 6

Topic: Industrial applications: Design and
simulation of power converters for solar energy
harvesting

Experts: Dr. Gurumurthy S R

Dr. B R Anathapadmanabha

Dr. Shankar Nalinakshan, Dr. Jayasankar V N

11.45 AM - 1.15 PM

Session 7

Topic: Industrial applications: Design and
simulation of power converters for solar energy
harvesting

Experts: Dr. Gurumurthy S R

Dr. B R Anathapadmanabha

Dr. Shankar Nalinakshan, Dr. Jayasankar V N

2.30 PM - 4.30 PM

Session 8

Topic: Hands-on session (Industrial Applications)

Experts: Dr. Gurumurthy

Dr. B R Anathapadmanabha

Dr. Shankar Nalinakshan, Dr. Jayasankar V N

24/07/2021

10.00 AM-11.30 AM

Session 9

Topic: Introduction to LogicSim, Basic digital circuits

Expert: Dr. Arulalan Rajan

11.45 AM - 1.15 PM

Session 10

Topic: Digital circuits & Boolean functions

Expert: Dr. Arulalan Rajan

2.30 PM - 4.30 PM

Session 11

Topic: Hands-on session -LogicSIM (Digital)

Expert: Dr. Arulalan Rajan

25/07/2021

10.00 AM-12.00 AM

Session 12

Topic: Yoga session: Yoga for Stress management

Expert: Mrs. Suma Bhat

1.30 PM - 3.00 PM

Session 13

Topic: Hands-on session (Digital) LogicSIM

Expert: Dr. Arulalan Rajan

3.15 PM - 5.00 PM

Session 14

Test, Feedback and Valediction

RESOURCE PERSONS

Dr. Ashok Rao

Former Head, Network Project at CEDT
IISc Bangalore

Prof. Saragur Narasimhan

Systems Architect at SAROJA ENTERPRISES
Mysore

Dr. Arulalan Rajan

Faculty at Centre for Continuing Education,
IISc Bangalore

Dr. Yajunath Kaliyath

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Dr. Gurumurthy S R

Professor, EEE, NIE Mysore

Dr. Anantha Padmanabha

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Dr. Jayasankar V N

Assistant Professor, EEE, NIE Mysore

Mrs. Suma Bhat

RPL certified Yoga instructor., SPYSS