# **Registration Form**

Short-term Course on "Hands on Exposure of Electric Vehicles: Power Electronics, Battery Management System and Future Aspects" August 22<sup>nd</sup> - 24<sup>th</sup>, 2025 Department of Electrical Engineering RGUKT,Basar,Nirmal,Telangana -504107

Name:
Designation:
Department:
Institute/Organization:
Qualification:
Specialization:
Mailing Address:
Phone(M):
Email
Accommodation required(Yes/No)
Registration Category: Faculty/Student/Industry
Registration fee details:
Transaction Ref. No
Transaction Date
The above information provided is true and to the best
my knowledge.

If selected, I agree to abide by the rules and regulations of the course.

Date : .....

Signature of Candidate

of

The applicant will be permitted to participate in the above program, if selected.

Date .....

Signature of Sponsoring Authority /Head of the Institute with Seal Chief Patron: Prof. A. Govardhan,

Hon. Vice-Chancellor, RGUKT, Basar

Patron: Prof. E. Murali Darshan,

Administration Officer & OSD, RGUKT, Basar

Chief Investigator: Dr. Namani Rakesh,

Assistant Professor, Department of EE, RGUKT, Basar

#### **Coordinators:**

**Mr. Laxman Mutyam** Assistant Professor, Department of EE,RGUKT, Basar

Dr. B. Bhavsingh Assistant Professor& HoD, Department of EE,RGUKT, Basar Organizing Committee:

Student Coordinator: Mr. Sriparth Reddy (EE) Faculty & Students of EE department

# **Course Content**

Morning (Theory Session): (10:00 AM to 1:00 PM)

Day-1: Introduction to EV, Powertrain Components, Types of EVs,

BEVs, PHEVs, HEVs and powertrain architecture

**Day-2:** Battery Management System, Charging systems, Battery Technology, Charging infrastructure, Battery performance metrics, fast charging, Smart charging and vehicle-to-grid (V2G) technology

**Day-3:** EV Control Systems, Safety, Future Trends, Motor control algorithms, Regenerative braking systems, Vehicle dynamics, control for EV, Safety considerations for high-voltage systems, Future trends in EV technology autonomous driving, connected vehicles, wireless charging and battery recycling

#### Afternoon (Practical session): (2:00 PM to 5:00 PM)

**Day-1:** Hands-on identification and examination of EV components, Basic circuit analysis of simple EV circuits using multimeters and other components

**Day-2:** Demonstration of battery testing procedures, Discussion of battery management system (BMS) functionalities.

**Day-3:** EV System Integration Troubleshooting, Case studies of EV integration challenges, Introduction to basic troubleshooting techniques for EV systems And Q&A session with Industry experts.

# **RESOURCE PERSONS**

Academicians from IITs, IISc, NITs, CDAC and professionals from industries

# NaMPET @RGUKT Basar

Short-term Course on "Hands on Exposure of Electric Vehicles: Power Electronics, Battery Management System and Future Aspects"

# AUGUST 22<sup>nd</sup> to 24<sup>th</sup> ,2025



## DEPARTMENT OF ELECTRICAL ENGINEERING

Rajiv Gandhi University of Technologies, Basar, Nirmal, Telangana-504107, India.

## www.rgukt.ac.in



Under the aegis of NaMPET Phase III

National Mission on Power Electroni<mark>cs Technol</mark>ogy

#### **Nodal Centre**



Ministry of Electronics and Information Technology Government of India Centre for Development of Advanced Computing (C-DAC), Thiruvananthapuram

### PREAMBLE

Nowadays, the power electronics plays an important role in all the industrial and domestic appliances. Further, it is everywhere in revolutionizing future energy systems in the world. India is the world's third largest producer of renewable energy. The power electronic converters regulate supply from renewable energy to feed to various electric loads. One of the most important applications of power electronics in electric drives. The electric drives became a family member for most of industrial processes. It gains much importance in electric vehicle (EV) design, which is burning topic nowadays. The proposed short term course discusses the electric vehicle power train architecture, battery management system, charging system, control aspects, safety precautions, current and future trends in EV technology, practical skills in EV design and troubleshooting.

# About the Centre for Development of Advanced Computing (C-DAC)

Centre for Development of Advanced Computing, Thiruvananthapuram, C-DAC is a Scientific Society of the Ministry of Electronics and Information Technology (MeitY), Govt. of India. The centre has been working in applicationoriented research, design and development for various strategic, industrial consumer electronics and IT systems. In this process, the centre has acquired competency, expertise and extensive experience in the area of Power Electronics, Control & Instrumentation, Networking, Communications, ASIC design and Underwater Electronics. The Power Electronics Group, C-DAC has been working in applicationoriented research, design and development for various industrial and customer requirements for the and Grid. A stable, protected, energy efficient and good supply quality past four decades. The Power Electronics group has wide experience of developing successful power electronics products/systems, and a very good industry interaction by way of transfer of technology, field implementation, etc. It has very close association with reputed academic institutions like IISc, IITs, NITs, etc. CDAC has contributed significantly to the growth of industry through indigenous development of commercially viable products and systems, foreign technology absorption, consultancy, training and turnkey implementation of contract projects.

## About National Mission on Power Electronics Technology (NaMPET)

National Mission on Power Electronics Technology- NaMPET is a national mission program launched by the Ministry of Electronics and Information Technology (MeitY), Govt. of India, with a vision to provide the country with the capability to become a dominant player in Power Electronics Technology. Through this National level Program, Research, Development, Deployment and R&D Commercialization of Power Electronics Technology is envisaged by enhancing the indigenous R&D expertise and infrastructure in the country with active participation from academic institutions and industries. Centre for Development of Advanced Computing (C-DAC), Thiruvananthapuram, a premier R&D organization under MeitY, is the Nodal Centre co-ordinating the activities of NaMPET. Ongoing third phase of NaMPET is focusing on Technology development in key areas such as e-mobility, smart grid, wide band gap devices etc. along with awareness creation activities.

# About the University "RGUKT Basar

**Rajiv Gandhi University of Knowledge Technologies** (**RGUKT**) **Basar** is unique university which actively uses Information and Communication Technology (ICT) in teaching. It is perhaps the first of its kind in the country with an educational model that is intensely ICT based and established by the Government of erstwhile Andhra Pradesh vide a special act of legislation. This campus is loacated at the holy land of Basar (the abode of Gnyana Saraswathi, Goddess of knowledge) in Nirmal District (Telangana State). The campus is set in about 272 acres of salubrious and serene surrounding just a short distance from the banks of river Godavari.

### About the Dept. of Electrical Engineering

The **Department of Electrical Engineering** was started in the year of 2010. The vision to establish the Department of Electrical Engineering is to generate the dynamic engineers who could make a difference in the modern day society. This can be accomplished by teaching students at the best of quality. We have highly qualified and experienced faculty to develop the budding students into Dynamic Engineers. The Department conducts several Guest lectures, Workshops and Industrial visits to develop the student's practical knowledge.

### How to Apply/Registration/Course fee

**Expected Number of Participants : 45** Students- Rs. 590/-Faculty- Rs. 1180/-Industry- Rs. 2360/-

Note: (1). The fees are inclusive of 18% GST, and (2). Student/ Research Scholar has to submit their Institute ID card copy. Application in the prescribed format of registration form duly signed by the candidate and Head of the Department/ Institution along with all details including registration fee transaction number, has to submit and upload in the following **Google form**.

#### https://forms.gle/i3UuhZ1RtTop8HQQ9

DETAILS OF ONLINE PAYMENT: UPI ID: 8985485720-2@ybl Name: Namani Rakesh



# The Registration fee will include Registration kit, Breakfast, high tea, Lunch and Dinner.

The selection is on a first come first served basis depending upon the availability of seats. Registration charges are nonrefundable for the selected participants.

#### **IMPORTANT DATES TO REMEMBER**

Last date of filling registration form:August 7th , 2025Confirmation of selection by e-mail:August 10th, 2025Course Duration:August 22nd - 24th, 2025

#### **BOARDING AND LODGING**

Limited accommodations on twin-sharing basis will be available in the RGUKT Guest House/ Guest Room of Hostels for the outstation participants on a chargeable basis with an advance request and subject to availability. The participants will not be paid any TA/DA.

\*For any assistance, Contact the following Dr. Namani Rakesh - 8985485720 Mr. Laxman Mutyam - 9494578470 Dr. B. Bhavsingh - 9963800985 Mr. Sriparth - 8688922970