



# Indra Ganesan

## COLLEGE OF ENGINEERING

Madurai Main Road (NH-45B), Manikandam, Tiruchirappalli - 620 012  
Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai  
NAAC Accredited, 2(F) Status Institution by UGC



**3.5.1:** Number of functional MoUs/linkages with institutions/ industries in India and abroad for internship, on-the-job training, project work, student / faculty exchange and collaborative research during the last five years.

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TO WHOMSOEVER IT MAY CONCERN


This is to certify that, the following list of activities were conducted based on the MoU signed between Indra Ganesan College of Engineering, Tiruchirappalli and Startus Electric, Tiruchirappalli

S.No.	Name of the Activity	No. of Students / Staff Benefited	Date of Activity
1	Value Added Course : Electrochemical Energy Storage	38	07.03.2022 to 11.03.2022
2	Research Methodology: Need for R&D @ Engineering Colleges	39	17.11.2021 to 18.11.2021

MoU Validity Period: 12.07.2021 to 13.07.2023

Signature of the MoU signed Industry with Seal

  
Signature of the Principal with Seal  
**PRINCIPAL**  
Indra Ganesan College of Engineering  
IG Valley, Madurai Main Road  
Manikandam, Trichy-820 012

  
Dr. G. Balakrishnan, M.E., Ph.D.,  
Principal  
Indra Ganesan College of Engineering  
IG Valley, Madurai Main Road  
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Tamil Nadu, South India

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igceprincipal@gmail.com



தமிழ்நாடு தமிழ்நாடு TAMILNADU

12 JUL 2021

BC 095591  
S. ராஜ்குமார்  
மு.தா. வி  
L.No: 6/2000  
மசினி, தமிழ்நாடு



**Memorandum of Understanding (MoU)**

Between

**STARTUS ELECTRIC INDIA PRIVATE LIMITED**

17, VENKATESHWARA STREET, 1ST  
JAYA NAGAR, LIC COLONY, TRICHY-620021,

and

**Indra Ganesan College of Engineering**

Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai

Madurai Main Road (NH-45B), Manikandam, Tiruchirappalli - 620 012



STARTUS ELECTRIC INDIA PRIVATE LIMITED



**Dr. G. Balakrishnan, M.E., Ph.D.,**  
Principal  
Indra Ganesan College of Engineering  
IG Valley, Madurai Main Road  
Manikandam, Trichy-620 012.

## MEMORANDUM OF UNDERSTANDING

This Memorandum of Understanding (MoU) entered into and executed at Trichy on 13.07.2021.

### BETWEEN

**STARTUS ELECTRIC INDIA PRIVATE LIMITED**, 17, VENKATESHWARA STREET, 1<sup>ST</sup> JAYA NAGAR, LIC COLONY, TRICHY-620021, Tamilnadu, India, represented by its Managing Director, **Mr. R.PRADEEPKUMAR**.

### AND

**INDRA GANESAN COLLEGE OF ENGINEERING** (hereinafter referred to as "IGCE"), an educational institution having its campus at Manikandam, Trichy - 620012, Tamilnadu, India, represented by the Head of the Department, **Dr.G.Malathi**

### WHEREAS

**STARTUS ELECTRIC INDIA PRIVATE LIMITED** is a fast upcoming process automation company having deep presence in verticals like process industries, Food and Beverage & SPMs. The company started in the year of 2012 with the vision of bringing the latest technology in a cost effective manner to its customers through its offering. We managed by professionals who have rich experience in the field of industrial automation. **STARTUS ELECTRIC INDIA PRIVATE LIMITED** growth has been primarily driven by its transparent business approach, strong customer focus, adherence to quality and post sales support for its offerings.

### WHEREAS

**IGCE** is a well established institution based at Trichy, has a strong industrial interaction with their experts having technical expertise/core competence from different technical fields in the respective UG disciplines namely Civil Engineering, Computer Science and Engineering, Electrical and Electronics Engineering, Electronics and Communication Engineering, Information Technology, Mechanical Engineering and PG disciplines namely VLSI, Computer science.

**STARTUS ELECTRIC INDIA  
PRIVATE LIMITED**

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**Dr. G. Balakrishnan, M.E., Ph.D.,**  
Principal

**Indra Ganesan College of Engineering**  
IG Valley, Madurai Main Road  
Manikandam, Trichy-620 012.

**IGCE**

IGCE has a vision to bridge the Industry - Institute gap, to increase the employability of the students, to make them meet the expectations of the industry, to get their jobs and prepare them for a successful career.

#### **Objective of EEE Department**

- To produce competent and disciplined Electrical and Electronics Engineers.
- To develop a center for practical excellence and research.
- To provide consultancy activities for industries.
- To develop students to meet the knowledge explosion and global competence.

#### **AND WHEREAS**

The parties herein now intend to enter into this MoU to facilitate the above objectives through orientation and development for their mutual benefit.

NOW THEREFORE THE PARTIES HEREIN REDUCE INTO WRITING THEIR RESPECTIVE OBJECTIVES AND THE STRUCTURE AND FUNCTIONING OF THIS UNDERSTANDING.

#### **I. AIMS AND OBJECTIVES**

To reduce the gap between Industry and Institute, by providing projects and training and to provide faculty and facility resource to the organization for developing skills.

#### **II. IGCE**

- IGCE hereby agrees to provide its faculty having expertise in the field of Electrical and Electronics Engineering for the following area.
  1. Microprocessor and Microcontroller
  2. Embedded System Concepts
  3. PLC, SCADA
  4. Innovative Techniques using Embedded
- IGCE shall utilize their expertise for the above task by assigning our faculty members from Department of Electrical and Electronics Engineering who will be responsible in interaction, correspondence with **STARTUS ELECTRIC INDIA PRIVATE LIMITED** towards successful achievement of the above task and aims and objectives of this MoU.
- IGCE will utilize their infrastructure wherever applicable to complete the task.
- IGCE will provide their expertise in finding solutions for various problems faced by the organization during the design, production and operation.

**STARTUS ELECTRIC INDIA  
PRIVATE LIMITED**

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**Dr. G. Balakrishnan, M.E., Ph.D.,**

Principal

**Indra Ganesan College of Engineering  
IG Valley, Madurai Main Road  
Manikandam, Trichy-620 012.**

**IGCE**



- v. IGCE will permit the **STARTUS ELECTRIC INDIA PRIVATE LIMITED** to utilize their library facilities.

**III. STARTUS ELECTRIC INDIA PRIVATE LIMITED**

- i) The Organization shall permit the faculties designated inside their campus for interaction and development of the project.
- ii) The Organization will permit the students of IGCE for their industrial visit as mutually agreed from time to time.
- iii) The Organization agrees to participate in curriculum / extra curriculum designing and give a guest lecturers for the benefit of IGCE student
- iv) The Organization agrees to permit student level projects whenever they required.
- v) The Organization will conduct a product development course.

**IV. STARTUS ELECTRIC INDIA PRIVATE LIMITED AND IGCE HAVE FURTHER AGREES AS FOLLOWS.**

IGCE shall assure that the designated faculty members posses the knowledge in the area and technical expertise to coordinate and execute the aims and objectives.

**STARTUS ELECTRIC INDIA PRIVATE LIMITED** shall assure the assistance in infrastructure, men and give the technical inputs wherever necessary in executing the design and development of their products.

**V. INTELLECTUAL PROPERY RIGHTS (IPR)**

IGCE faculty shall maintain integrity of the technique / technology of **STARTUS ELECTRIC INDIA PRIVATE LIMITED** products and process observed during their visit and consultancy work.

**VI. DURATION OF THIS MOU**

It is agreed by IGCE and **STARTUS ELECTRIC INDIA PRIVATE LIMITED** that the terms of this MOU shall be in force for a period of **THREE** years from the date of this MoU, which may on mutual concern between be extended for further periods on such terms as agreed mutually.

**STARTUS ELECTRIC INDIA  
PRIVATE LIMITED**

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**Dr. G. Balakrishnan, M.E., Ph.D.** IGCE

Principal

Indra Ganesan College of Engineering  
IG Valley, Madurai Main Road  
Manikandam, Trichy-620 012.

## VII. TERMINATION

This MoU may be terminated by either party, upon providing the other an advance notice of six months or at the end of the semester.

This MoU may be termed terminated upon non-receipt of renewal request from either party after its tenure.

However, the parties hereto agree that this MoU shall be immediately terminated upon either party breaching any of their conditions of this MoU or being unable to rectify the same within a reasonable period.


In witness whereof the parties hereto have affixed their signatures to this agreement on this day.

For Startus Electric  
India Private Limited



Mr. R. Rethinasamy  
Managing Director  
17, Venkateshwara Street,  
1<sup>ST</sup> Jaya Nagar,  
LIC Colony, Trichy,  
Tamilnadu, India-620021


For Indra Ganesan College of  
Engineering



Dr. S. Bharathi Raja  
Principal  
Indra Ganesan College of  
NH45B-Madurai Road,  
Manikandam, Trichy.  
Tamilnadu, India-620012.



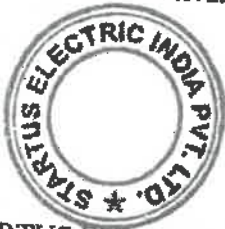
In Presence of



1. Mr. G. Raja  
Manager  
Startus Electric India Private Limited  
Trichy




2. Mr. R. Sandhu  
Project Manager  
Startus Electric India Private Limited  
Trichy



STARTUS ELECTRIC INDIA  
PRIVATE LIMITED

In Presence of



1. Mr. A. Richards Rethinasamy  
Assistant Professor  
Indra Ganesan College of Engg  
Trichy



2. Mr. S. Vijai  
Assistant Professor  
Indra Ganesan College of Engg  
Trichy

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Dr. G. Balakrishnan, M.E., Ph.D.,  
Principal

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IGCE



# Indra Ganesan

**COLLEGE OF ENGINEERING**

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## REPORT ON VALUE ADDED COURSE

Title: "ELECTROCHEMICAL ENERGY STORAGE"

Resource Persons: Mr.R.Durai Raj,  
Trainer,  
Startus Electric,  
Trichy

Date of conduct from : 07.03.2022 To: 11.03.2022 Duration: 30 Hours

Organized Department : Electrical and Electronics Engineering

Participant Year: 2,3,4 No. of Students Registered : 38

Venue: III Year Class Room

**Outcome of Value Added Course (VAC): At the end of the Course, Students can able to**

- Learn the thermodynamics in electrolyte solutions.
- Learn the concept of the electrochemical cell.
- Learn the most common electrochemical reactions measurement techniques.
- estimate the energy and conversion efficiencies of the energy conversion system
- Understand the need and potential of electrochemical energy storage.

### Assessment Process

- Students, who are securing more than 70% on total score and secured more than 75% in attendance is eligible to receive the certificate for the VAC course conducted
- Total Score = (0.5 \*Attendance in VAC out of 100 percentage + 0.5 \*Test mark in VAC out of 100 marks)

VAC Coordinator


G. Ma Lath  
HOD/EEE

Principal

Dr. G. Balakrishnan, M.E., Ph.D.,  
Principal  
Indra Ganesan College of Engineering  
IG Valley, Madurai Main Road  
Manikandam, Trichy-620 012.



## Report on Two Day Research Methodology Workshop

Title:	Two Day Research Methodology Workshop on "Need For R&D @ Engineering Colleges		
Resource Person:	Mr. Mr.K.Selvakumar Hr Manager Startus Electric	 <b>Dr. G. Balakrishnan, M.E., Ph.D.,</b> Principal Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012.	
Date of conduct from	17.11.2021 & 18.11.2021	2 Days	
Organized Department	ELECTRICAL AND ELECTRONICS ENGINEERING		
Participant Year:	2,3,4	No. of Students Registered :	39
Venue:	EEE Seminar Hall		

### Outcome of the RM :At the end of the Course. Students can able to

- Know about the importance of Research and Development
- Know about R&D leads to the creation of new and innovative products and services.
- Apply new products and services can also generate new intellectual property for individual business
- Evaluate the safety and quality of project deliverables.
- Know about new products and services or to improve their existing offerings



  
RM Coordinator

  
HoD/EEE

  
Principal