

## Objective of the Summer Internship Program

This internship/ training program is designed according to the need of Undergraduate and Post Graduate Students of Electrical Engineering. Power electronics is essential in the advancement of current technology in applications like Electric Vehicle (EV), Renewable energy conversion and also in day-to-day. For an enthusiastic for involvement of students in latest emerging trends of power electronics, a hands-on practice on various converters is essential. This internship program is designed for instilling technical skills in UG/PG students for facilitating a good career starts-up. The various aspects of power electronics such as the design of regulated/unregulated power supplies, gate driver circuits, and micro-scale converters for EV, renewable and other applications in general will be dealt in this SIP. Simulation and Hardware development are the key features of this internship. This internship anticipate that it not only builds the fundamental engineering concepts but also offer a very sound technical circuit development/analysis skill.

## Course Content

The course majorly contains the following:

- Basics of Power Electronics.
- Role of power electronics in day-to-day life.
- Design of power electronic converter.
- Application of power electronics converter in renewable energy (PV etc.) and green electric (EV) transportation.
- Hands-on practice of simulation software (e.g. MATLAB/PSIM)
- Programming of various controller (DSP/ AUDRINO etc.)
- Modelling and Simulation of Electric Vehicle Chargers.
- Designing & Fabrication of Power Supplies.
- Design and Fabrication of High Frequency converters.
- Hands-on practice of designing & fabrication of power electronic converters.

## Eligibility / Target Audience

This summer internship program is targets UG, PG (Power System or Power Electronics) students and Faculty of Govt. / Govt. aided / self- financed engineering colleges who are interested in computer simulation, designing & fabrication of Power Electronic Circuits. All the undergraduate students who are appearing in the 4th and 6th semester examinations are eligible to apply.

## How to Apply / Registration

UG Students (EE/ EEE/ EC)	₹ 10000
PG Students/PhD	₹ 11800
Faculty	₹ 11800
Mode for Payment	Demand Draft or NEFT/IMPS

(Inclusive of 18% Goods and Service tax [GST])

- **Demand Draft:**  
"Registrar (Industrial Consultancy Cell), MNIT Jaipur"  
Payable at Jaipur
- **NEFT/IMPS:**  
**Registrar (ICC), MNIT Jaipur**  
**Account No. 676801081625**  
**IFSC CODE: ICIC0006768 (ICICI BANK, MNIT)**

The applicants must register themselves [after fee submission] for Summer Internship Program on SEaSR lab website (link available below) latest by 22<sup>nd</sup> April 2019.

<https://sites.google.com/view/seasrslab>

**Kindly read the instructions available on website carefully before registering.**

**Note: The demand draft must be sent to the below mentioned address of communication through a reputed courier service only.** The selection is on "first come first serve" basis depending upon the availability of the seats. Registration fee is non-refundable.

### SEaSR Lab., Handmade Prototype for EV Battery Charging



## Registration Form

Summer Internship Program

on

# Design, Modeling & Implementation of Power Electronic Circuits for Renewable Energy and Electric Vehicle Chargers

20th May – 5th July 2019

Department of Electrical Engineering, MNIT Jaipur – 302 017 Rajasthan

Name: \_\_\_\_\_

Category (UG/PG): \_\_\_\_\_

Branch: \_\_\_\_\_

Semester: \_\_\_\_\_

Department: \_\_\_\_\_

Institute: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Phone (M) \_\_\_\_\_ (O) \_\_\_\_\_

E-Mail: \_\_\_\_\_ @ \_\_\_\_\_

Accommodation Required? (Please tick)

<input type="checkbox"/>	<b>YES</b>	<input type="checkbox"/>	<b>NO</b>
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**Registration fee Details (Tick on applicable)**

Mode of Payment	DD	IMPS/NEFT
Transaction Reference No.		
Date		
Registration Amount		

The payment has to be made to the "Registrar (Industrial Consultancy Cell), MNIT Jaipur"

The above information provided is true and to the best of my knowledge. If selected, I agree to abide by the rules and regulations of the program and MNIT Jaipur.

Date: \_\_\_\_\_ Signature of Candidate

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

Date: \_\_\_\_\_ Signature of HOD with Seal

### **About MNIT Jaipur**

Malaviya National Institute of Technology Jaipur (Deemed University) is one of the premier NITs, designated with the status of "Institute of National Importance" by MHRD. The institute was established in 1963, and its campus spreads over 325 acres of lush green area in the central location of Jaipur city. The institute offers undergraduate and postgraduate courses (B.Tech., M.Tech. /MBA/ M.Sc. & Ph.D.) to about 4500 students, in leading fields of engineering, technology, architecture, management & sciences. Through the internationally renowned faculty, laboratories with state of art equipment's and excellent infrastructure, the institute is actively engaged in research, consultancy and developmental activities, besides imparting regular teaching.

### **Electrical Engineering Department**

The Department is one of the oldest departments of the institute, offering a fine blend of experience and innovation in teaching. Presently, offering under- graduate and post-graduate studies in Electrical Engineering and Power Systems & Power Electronics Engineering, respectively. The department is home to over 35 research scholars, pursuing Ph.D. in varied fields of Electrical Engineering. The department provides a life-long learning experience, through its state of art laboratories, vast pool of courses, and industry-orientation. A strong collaborative framework with reputed universities in India and abroad, the department offers ample opportunities for individual growth.

### **About Jaipur**

The city of Jaipur also known as Pink City and is the capital and largest city of Rajasthan. Jaipur has the attractions like Hawa Mahal, Amber Fort, Jaigarh Fort, Nahargarh Fort, Jal Mahal, Kanak Vrindavan Valley, City Palace, Jantar Mantar, Albert Hall Museum, Sisodia Rani Garden, Govind Dev Ji Temple, Birla Temple, etc.

### **BENEFITS TO THE STUDENT INTERNS**

- Individual Batch-wise staff Allocation & Assistance
- Materials cum Certifications
- Hands on Oriented Training – Preparing for Basics on their domain, and Coding.
- Certificate on Internship Completion / Implementation
- Realtime hardware implementation.

### **Organizing Committee**

#### **Patron**

Prof. Udaykumar R Yaragatti, Director, MNIT-Jaipur

#### **Program Advisor**

Prof. R.A. Gupta, Professor, Department of Electrical Engineering, MNIT-Jaipur

#### **Program Coordinators**

Dr. Arun Kumar Verma, Assistant Professor, Department of Electrical Engineering, MNIT-Jaipur

Dr. Nitin Gupta, Assistant Professor, Department of Electrical Engineering, MNIT-Jaipur

Dr. Neeli Satyanarayana, Assistant Professor, Department of Electrical Engineering, MNIT-Jaipur

#### **Accommodation**

Limited accommodation is available in the MNIT Hostels for outstation participants on nominal charges at first come first serve basis. The participants will not be paid any TA/DA. Charges of Institute Hostels are approximately **Rs. 200/-\* per day** including food and accommodation

#### **Important Dates**

Last date of receiving complete registration form	<b>30<sup>th</sup> April 2019</b>
Confirmation of selection by E-mail	<b>10<sup>th</sup> May 2019</b>
Internship Duration	<b>20<sup>th</sup>May to 5<sup>th</sup> July 2019</b>

#### **Address for Communication**

#### ***Dr. Arun Kumar Verma / Dr. Nitin Gupta***

Assistant Professor  
Department of Electrical Engineering,  
Malaviya National Institute of Technology,  
J. L. N. Marg, Jaipur-302 017, Rajasthan  
M: +91-8824478746, +91-9783948059, +91-9825363365  
E-mail- searlab.eemnit@gmail.com

**\*Accommodation rates are tentative and all right reserved by the hostel office MNIT Jaipur.**

### ***Self-financed Summer Internship Program***

**With Aim**

**"Make India the Skill India"**

**On**

### ***Design, Modeling & Implementation of Power Electronic Circuits for Renewable Energy and Electric Vehicle Chargers***

**20<sup>th</sup> May to 5<sup>th</sup> July 2019**



**Organized By**

**Department of Electrical Engineering  
Malaviya National Institute of Technology**

**Jaipur- 302 017 Rajasthan- India**

**(www.mnit.ac.in)**