

**Department of Electrical and Electronics Engineering**  
**National Institute of Technology Karnataka, Surathkal**  
**Call for Online Research Internship**  
**Supported by SERB, Accelerate Vigyan (Vritika) Scheme**

**Project Title: Design and Development of Power Factor Correction Converter for Power Supply Equipment**

### About VRITIKA

‘VRITIKA’ is the call for initiation and practice in science through Training and Skill Internship. This program aims to provide opportunities to promising PG students from universities and colleges to get exposure and research skill development experience. These internships will primarily be facilitated by organizations / institutions / laboratories of national importance such as IITs, IISc, IISERs, NITs, CSIR, ICAR, ICMR etc. For more details visit the following links: <https://acceleratevigyan.gov.in/programs/abhyas/vritika> & <http://serb.gov.in/abhyas.php>

### Scope of the Internship

Many power supply units such as electric vehicle chargers, switched mode power supplies, etc require front end AC-DC converter. It contains power factor correction (PFC) stage that shapes the input current to maximize the real power available from the mains and also, provides inherent current harmonic reduction. Further, most of the today's regulated power supplies should comply with the IEEE, IEC regulatory requirements. So, designing a high efficiency PFC converter with low cost is of utmost importance in many of the power electronic applications. In this regard, this internship program would emphasize the training on systematic design procedure for PFC converter. Addition to this, participants will be exposed to hardware development of PFC converter topologies.

### Who can Apply?

**Regular PG level (MTech/M.E./M.S)** students pursuing their degree from Institutions within India (primarily from universities, colleges, private academic institutions).  
Specialization: Power Electronics / Electrical Drives / Power and Industrial Drives / Power Systems and related domains.

### Details of Internship

- ❖ **Duration – 21<sup>st</sup> February 2022 - 16<sup>th</sup> April 2022**
- ❖ Venue: Online Mode (Google Meet or MS-Teams)
- ❖ Number of Interns Required – 05
- ❖ **Last date for registration: 12<sup>th</sup> February 2022**
- ❖ Intimation of selected students: 18<sup>th</sup> February 2022

### Registration Process:

- ❖ **Step 1:** The candidate has to obtain the no objection certificate (NOC) from the Head of the Department / Institute in the prescribed format. ([Click here for NOC](#))
- ❖ **Step 2:** The candidate shall apply for the Internship program by filling his/her details and uploading the NOC in the following Google form:  
<https://forms.gle/XMtXf8X1CYPTxmup6>

### Selection process:

The registered candidates shall be shortlisted for written test / interview / both based upon the eligibility criteria and academic performance / GATE score. The shortlisted candidates shall be selected for the research internship program based on the performance in written test / interview.

### Terms and Conditions:

- ❖ The supervisor to whom the interns are attached would be assigning them tasks / assignments, on which, the intern should work and prepare a report to be submitted.
- ❖ A certificate regarding successful completion of internship shall be issued to the intern by the supervisor and head of the department on satisfactory completion of the internship and on submission of the assignment report.
- ❖ No stipend will be provided for the internship.

### Event Organizer

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