

# PMRF-ISSS Teaching Programme

Prime Minister Research Fellowship students' teaching requirement  
facilitated by the Institute of Smart Structures and Systems



Module PMRF-ISSS069

## Power Electronics for beginners

### Name of the PMRF student

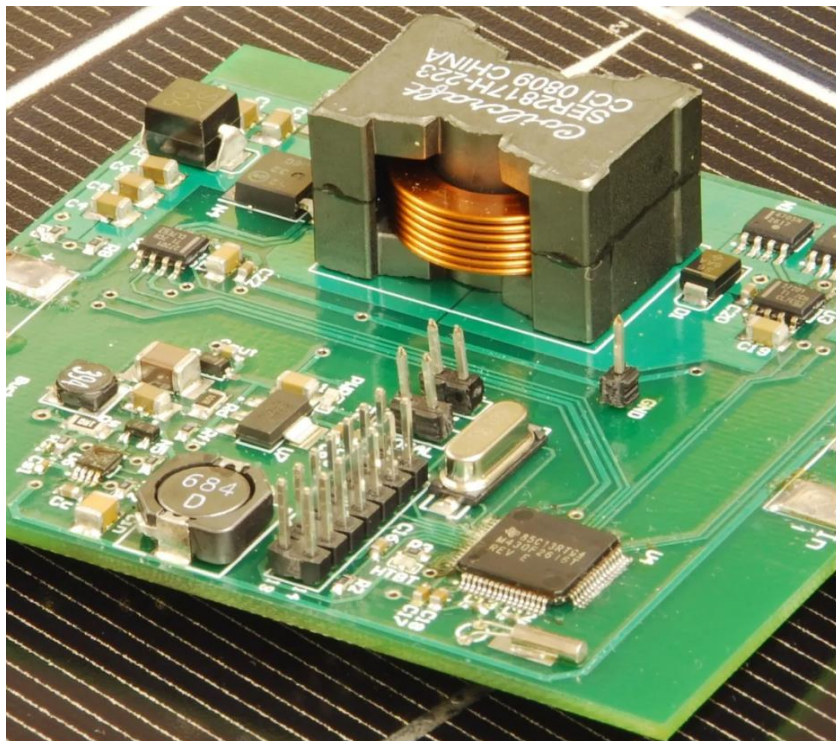
PROSEN DEY

### Required background of the students taught

Undergraduate students in Electrical Engineering.  
No prerequisite is required.

### Online session coordinator

Will be chosen from the list of registrants



### Schedule of the module

Start Date: 3<sup>rd</sup> March 2023

End Date: 26<sup>th</sup> May 2023 (Tentative)

Classes on: Friday 9 AM to 11 AM

### Details of the content of the module

This is an introductory Power Electronics course designed for undergraduate students of Electrical Engineering. It is assumed that the person taking the course has no prior knowledge of Power Electronics.

Week1: Ideal switch-one quadrant, two quadrant and four quadrant switches

Week2: Power diode- Construction, operation and characteristics

Week3: Power BJT- Construction, operation and characteristics

Week4: Power MOSFET- Construction, operation and characteristics

Week5: IGBT- Construction, operation and characteristics

Week 6,7: Gate driver design and protection

Week 8: Uncontrolled Rectifier- Single phase

Week 9: Fully controlled Rectifier- Single phase

Week 10,11: Uncontrolled Rectifier- Three phase

Week 12,13: Fully Controlled Rectifier- Three phase

Meeting link : Will be shared later

Contact email ID: [issf.forum@gmail.com](mailto:issf.forum@gmail.com)

Registration link: Scan the QR code

