

PMRF-ISSS Teaching Programme

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



Module PMRF-ISSS043/2023

Intro to Nanotechnology

Name of the PMRF student

Sudipta Nayak

Required background of the students taught

Any Science or Engineering Bachelors

Online session coordinator

Will be chosen from the list of registrants

Details of the content of the module

The course will survey various aspects of Nanotechnology. First, we will go over necessary physics and then we will discuss the nano-application.

A) Nano-bio: physics & application

nanopores, nano-implants & nanobots

B) Nano-photonics: physics & application

photonic Devices including waveguide, gratings and ring resonator

C) Solid Nano-mechanics : physics & application

Cantilever, 2d membranes

D) Fluid Nano-mechanics : physics & application

Basic Operation of Microfluidic chip, microdroplet technology, more

E) Nanoelectronics: physics and application

2D gas & Quantum Dot Devices, Quantum Behaviour



Schedule of the module

Start Date: May 1, 2024

End Date: June 30, 2024

Recorded Videos will be released every Saturday and Sunday

Meeting link : Will be shared later

[Link](#)

Contact email ID: issf.forum@gmail.com

Registration link:

<https://forms.gle/SQ9MZY7wbEycMcgHA>