

PMRF-ISSS Teaching Programme

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



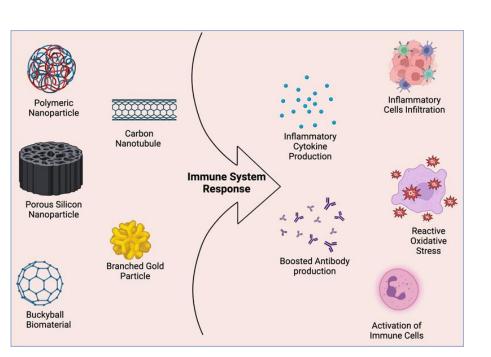
Module PMRF-ISSS153/2024 Biomaterials – Immune Interactions

Name of the PMRF student

Vinod Kumar Dorai

Required background of the students taught

The course is open to doctoral and master's students from all disciplines and undergraduate students who have completed their second year.



Abidemi Oluwole et. al., ACS Applied Bio Materials (2024)

Details of the content of the module

This introduces the basics course of biomaterials and Immune interactions, making it ideal for beginners and laying the groundwork for studies. more advanced lt covers the fundamentals of polymer science, polymeric materials used in the body, non-polymeric implant materials, and how the body reacts to implants. You'll also learn about drug delivery systems and the basics of tissue engineering.

you'll explore techniques to study immune cells' responses to biomaterials, with an introduction to flow cytometry and its applications.

We will also delve into engineering the immune system with biomaterials, discussing materials used to modulate the immune system, applications, and recent trends in the interaction between biomaterials and the immune system.

Nature of the Module: Lectures and Discussion

Schedule of the module

The course starts from 4th October 2024 to 21st February 2025.

Lectures on Friday and Saturday – 7:30 AM to 9:00 AM

Discussion on every 4th Saturday – 9:00 AM to 10 AM

Total Duration: Approx 50 hrs

Meeting link: Will be shared later

Link

Contact email ID: isss.forum@gmail.com

Registration link:

https://forms.gle/rSjopZVotiKTpdsJA