



Module PMRF-ISSS045/2025

Molecular Imaging Techniques

Name of the PMRF student

Arjun SV

Required background of the students taught

Basic Biology, Chemistry and Maths

Students interested in Biomedical Engineering and Biomedical Instrumentation can also join this course



Source: Molecular Imaging: Principles and Practices

Details of the content of the module

The course tries to elaborate on the techniques used in *in-vivo* molecular imaging which are either used in clinic or is in development. The course also tries to detail in on the development of contrast agents for these techniques. The techniques discussed in this course include but is not limited to:

1. Computed Tomography (CT)
2. Magnetic Resonance Imaging (MRI)
3. Positron Emission Tomography (PET)
4. PET/CT and PET/MRI
5. Fluorescence Tomography
6. Ultrasound
7. Photoacoustic Tomography

Apart from discussing the fundamentals of these techniques through recorded lectures/live sessions, some research papers on the same topics will be discussed in detail.

Source book: *Molecular Imaging: Principles and Practice* by Brian D. Ross and Sanjiv Sam Gmabhir, ISBN: 978-0-12-816386-3, Doi: <https://doi.org/10.1016/C2016-0-03739-7>

Schedule of the module

Tentative Dates: 10th May – 10th August, 2025

Timings: 3 PM- 5PM (Saturday and Sunday)

Recorded/Live Lectures, Total: 60 hours (approx.)

Additional Doubts sessions can be requested

Meeting link : Will be shared later

Contact email ID: issforum@gmail.com

Registration link:

<https://forms.gle/GiNorxVQVZLrL349A>