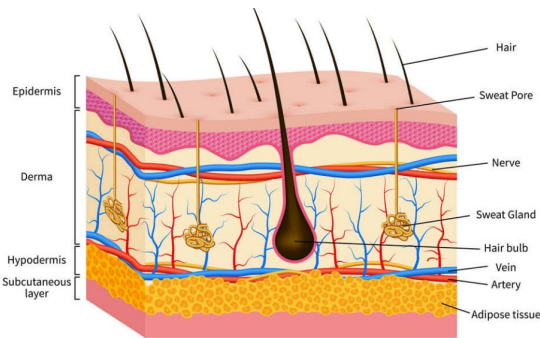


**ANRF-SERB Sponsored**

## **Faculty Development Program on**

## **Bioheat Transfer and its Applications in Radiation Therapy**

**28<sup>th</sup> August –1<sup>st</sup> September, 2025**



**SPONSORED By:**

**अनुसंधान नेशनल रिसर्च फाउंडेशन  
Anusandhan National Research Foundation**

**Organized by:**

**Department of Mechanical Engineering,  
SVNIT Surat**



## **ABOUT THE INSTITUTE**

The institute was initially established as Sardar Vallabhbhai Regional College of Engineering & Technology in 1961 and it is elevated to Sardar Vallabhbhai National Institute of Technology with the status of 'Deemed University' on 4<sup>th</sup> October 2002. The Sardar Vallabhbhai National Institute of Technology (SVNIT) is one of the pioneering engineering institutions of the country, which has contributed many outstanding engineers in India and abroad.

The Institute now offers eleven (11) B.Tech. Degree Programmes, twenty-one (21) M.Tech. Degree Programmes, three (03) Five Years Integrated M.Sc. Degree Programmes in Chemistry, Mathematics & Physics, One (01) Five Years Integrated B.Tech and M.Tech Degree Programme and Master of Business Administration in Business Analytics. Institute offers Doctoral Degree Programme in Engineering, Science, Management and English. Institute also offers M. Tech (R) in all the engineering disciplines and applied sciences.



## **ABOUT THE DEPARTMENT**

The Department of Mechanical Engineering is one of the oldest departments from the start of institute (1961). The department has qualified and dedicated faculty members with the specialization in various areas. The department is undertaking a UG programs in Mechanical Engineering, five PG programs (Thermal System Design, Mechanical Engg., Turbo Machines, CAD/CAM, and Manufacturing Engg.) and a research program leading to Ph.D. degree in related specialization. For industry people, master program by research and part time Ph.D. program are also available. The research facilities in mechanical department are developing with addition of new equipment and laboratories, and modernization of old laboratories.

## CHIEF PATRON

Prof. Anupam Shukla, Director

## PATRON

HoD, DoME

## COORDINATORS



**Dr. Hemant B. Mehta**  
Professor, DoME,  
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**Dr. Vipul M. Patel**  
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## ABOUT THE PROGRAM

This comprehensive program will cover a wide range of topics—from fundamental science to advanced technologies in bioheat transfer. Key objectives include:

- ♦ Fundamentals of lasers and their application in radiation therapy
- ♦ Fundamental of Computational Fluid Dynamics
- ♦ Numerical investigation of radiation transport and heat transfer in tissue
- ♦ Demonstration of commercial solvers for analyzing bioheat transfer
- ♦ Applications of Mechanical Engineering in Orthopaedics
- ♦ Monte Carlo methods for studying radiation transport in tissue
- ♦ Overview of instrumentation for bio-heat transfer analysis
- ♦ Heat Transfer through Fabrics and Skin Burn Injuries

## Hands-on sessions

- ♦ Generating synthetic tissue samples
- ♦ Measuring thermophysical and radiation properties of tissue
- ♦ Laser-tissue interactions and thermal analysis

## WHO CAN ATTEND

This workshop is open to faculty members, research scholars, post-graduate scholars, as well as industry professionals. Maximum 25 Faculties and 10 Students can attend the program on First come First Serve Basis.

## Registration Details

There is no registration fees. However, participants have to bear TA/DA expenses. The interested participants can fill the [registration form](#)

Accommodation at the Institute Guest House may be provided on a payment basis. The participant looking for accommodation in SVP guest house can fill the [booking form](#) and email it to vmp@med.svnit.ac.in well in advance.

## Important Dates

Last date of Registration: 21 Aug., 2025

Confirmation on Email: 22 Aug., 2025

FDP Dates: 28 Aug– 01 Sept., 2025