

**STUTI 21**  
**SATHYABAMA INSTITUTE OF SCIENCE AND TECHNOLOGY**  
**FINAL REPORT**

**DAY 1: 04-01-2023**

At 9.00 AM the program started with the registration process of the candidates and distribution of stationery kits to the participants. The program started with the national song followed by an inaugural ceremony by the guest of honor and a briefing about the STUTI program up to 11.00 AM. Then from 11.00 AM to 1.00 PM guest lecture on the fabrication, characterization, and applications of nanostructured thin films was taken by Dr.Kuppusami, SIST. Then from 2.00 PM to 4.00 PM hands-on training on sputtering and E-Beam thermal techniques. Dr. T.S.Shyju SIST and Dr.P.Vengatesh SIST. From 4.00 PM to 6.00 PM Hands-on training on atomic force microscopy was taken by Dr. D. Ramachandran, SIST.

**DAY 2: 05-01-2023**

From 9.00 AM to 11.00 AM Guest lecture on atomic force microscopy: General principles and applications were taken by Dr.J.Brijitta, SIST.. Then from 11.00 AM to 1.00 PM Guest lecture on Raman spectroscopy and its Applications was taken by Dr. T. Ravindran, IGCAR. Then from 2.00 PM to 4.00 PM hands-on training on the Raman spectrophotometer was taken by Dr. P. Vengatesh, SIST, and Dr.S.Anandh Jesuraj, SIST. From 4.00 PM to 6.00 PM Hands-on training in atomic force microscopy was taken by Dr. D. Ramachandran, SIST.

**DAY 3: 06-01-2023**

From 9.00 AM to 11.00 AM Guest lecture on Principles and Applications of XRD was taken by Dr. Piyush Chaunsali, IIT Madras. From 11.00 AM to 1.00 PM Guest Lecture on Hall Effect was taken by Dr.Gopika.G and Ms.Sushmita. Then from 2.00 PM to 6.00 PM hands-on session on Powder, Thin Film, and High-Temperature XRD (Hand-On).Dr.S. Anandh Jesuraj, SIST, and Mr.B.Vigneshwaran, SIST.

**DAY 4: 07-01-2023**

From 9.00 AM to 11.00 AM Guest lecture on High-performance Liquid Chromatography (HPLC-PDA) Gas Chromatography (GC-FID) by Dr. R. Rajesh Kannan, SIST. From 11.00 AM to 1.00 PM Guest Lecture on the Biogas plant was taken by Mr.Jeyakanth, SIST. Then from 2.00 PM to 4.00 PM hands-on HPLC-PDA and GC-FID were taken by Mr.S. Nandhagopal, SIST, and Mr. Carlton Ranjith, SIST. From 4.00 PM to 6.00 PM hands-on cell culture basics & Lab visit was taken by Mr. A.Madan Kumar, SIST, and Dr.S.Johnson Retnaraj Samuel.

#### **DAY 5: 08-01-2023**

From 9.00 AM to 11.00 AM Guest lecture on UV-Vis-NIR Spectrophotometer FTIR was taken by Dr.J.Karthikeyan, SIST. From 11.00 AM to 1.00 PM Hands-on session with UV-Vis-NIR Spectrophotometer FTIR was taken by Dr. Sanjeevi Prasath S, SIST. From 2.00 PM to 4.00 PM hands-on session and a theory session on Spectro-fluorometer were taken by Dr.Subhenjit Hazra, SIST. Optical, Inverted, and Fluorescence microscopy. From 4.00 PM to 6.00 PM hands-on session and a theory session on Optical, Inverted, and Fluorescence microscopy were taken by Dr. Sudha Uthaman, SIST.

#### **DAY 6: 09-01-2023**

From 9.00 AM to 11.00 AM Guest lecture on principles and applications of FESEM & EDAX.Elemental Analysis was taken by Mr. Raghuraman Kuppsamy and Carl Zeiss. Introduction and parameters of 3D printing. Dr.K.Gobi Saravanan, SIST. From 11.00 AM to 1.00 PM Guest lecture on the Introduction and parameters of 3D printing was taken by Dr. K.Gobi Saravanan, SIST. From 2.00 PM to 4.00 PM, a Hands-on session on FESEM & EDAX was taken by Mr. Viswanathan. K, SIST. From 4.00 PM to 6.00 PM hands-on session of 3D prototype printing was taken by Dr.K.Gobi Saravanan, SIST, and Dr. Manjunath Kamath, SIST.

#### **DAY 7: 10-01-2023**

From 9.00 AM to 11.00 AM Guest lecture on Principles and applications of HRSTEM was taken by Dr. Shyam Sinha, Thermo Fisher Scientific India Pvt. Ltd. From 11.00 AM to 1.00 PM guest lecture on HRSTEM, and the hands-on was taken by Mr. M.Thangam, SIST. From 2.00 PM to 4.00 PM, hands-on SCAS Facilities were taken by Dr.Sanjeevi Prasath and Mr. M. Saravanan. From 4.00 PM to 6.00 PM Hall effect was taken by Dr. Gopika.

