

One-Week Pharmacy Summer School 2024 on “**Hands-on Training for Advanced Formulations: Design, Development & Characterization**”

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One-Week Pharmacy Summer School 2024 on “**Hands-on Training for Advanced Formulations: Design, Development & Characterization**” during 2nd to 6th July 2024 has been organized by Department of Pharmaceutics & Center of Excellence in Nanotechnology Research, Shobhaben Pratapbhai Patel School of Pharmacy and Technology Management, SVKM’s NMIMS Deemed to be University, Mumbai at its campus. The program is designed in a unique way of its importance to cater the need of participants to enrich their technical skills as well as scientific knowledge. The program has one day full of plenary lectures in the area of nanotechnology whereas all the remaining days are completely of laboratory experimental component. A total of 44 registrations were received and divided into 4 batches for better experience of hands-on training. The participants are from different streams covering B.Pharm, M.Pharm, Ph.D. scholars, M.Sc and faculty of Assistant Professor and Associate Professor Cadre.

Four different types of nanoformulations were included in the summer school training which cover nanoparticles/solid lipid nanoparticles, nanosuspensions, nanofibers, and liposomes. For labs namely 604, 404, 406 and 407 were used dedicatedly for the development of each nanoformulation. In addition, central instrumentation lab (CIL) 401 has been used for characterization Participants were given thorough knowledge through explanation on principle and concept behind their formulation design followed by explanation of methodology to develop the product. Challenges during the design of a nanoformulation were taught during the lab discussion. 44 participants were divided into 4 batches and spread across 4 labs where 4 different nanoformulations were designed, developed and characterized. They were

rotated on daily basis. Each batch was further divided into 4 groups each of 3 or 4 participants, for performing their experimental work and develop the product. All the necessary chemicals, equipment set up, good laboratory practices covering apron, head cover, face mask, hand gloves, shoe cover are followed. Once the product is



prepared, the samples were given at CIL for characterization. Pilot plant facilities are also utilized to handle the equipment like microfluidizer, electrospinning equipment etc. Quality by design (QbD) approach in each nanoformulation has been covered during their experimentation.

For active engagement of the participants, published articles in the relevant field of nanotechnology are provided and case study discussions were held. Participants came up with nice critics of the work and that lead to a panel discussion among the batch members. All the days, participants were offered with working lunch, twice daily tea and snacks.

On the ending side of the program, all the participants were asked to share their views on summer school and to what extent their learning outcomes were fulfilled. An objective type assessment was conducted using google form link and all the participants attempted it successfully.

Participants were also asked to fill the feedback form, which will help the organizers to perform better in next program. The summary of feedback analysis has been found impressive and encouraging as around 95% of the participants have given excellent and around 5% as very good feedback about different sections of summer school as described in the enclosed summary report.

In the valedictory function, Dean Dr. Jagannath Sahoo has addressed the gathering and enquired about their satisfaction levels about participation for which he got great positive response. He expressed his happiness for the same and appreciated

the organizers including faculty and staff for their tremendous efforts. He also specially appreciated all the participants for spending their valuable time for learning new things about nanotechnology and suggested all of them to practice it and apply it in their research.

Dr. S. N. Koteswara Rao, HoD has highly appreciated the participants for their dedication and resource persons for their untiring efforts. Later, participation certificates were distributed to all of them and also to the resource persons and lab technicians who volunteered throughout the program. The valedictory function was closed with formal vote of thanks and then everyone dispersed after our National Anthem: Jana Gana Mana.

On overall, the One-Week Pharmacy Summer School 2024 on “Hands-on Training for Advanced Formulations: Design, Development & Characterization” held during 2nd to 6th July 2024 was a grand success with real-time hands-on training experience to the participants and the outcome of spreading the scientific knowledge and technical skills in the trending area of nanotechnology in pharmaceutical research has been fulfilled. Participants left the campus requesting to continue conducting such programs in which they are interested to participate and recommend to their network utilize the great opportunities.