

Short Term Course on
“Nanomaterials Synthesis and Characterization Techniques”
26th August to 8th September 2021

REPORT

Nanotechnology and Nanoscience are interdisciplinary fields that include chemistry, physics, biology, materials science, electrical engineering, and many more. The current course was implemented with an aim to provide an overview of some of the basic principles behind nanotechnology and nanomaterials, as well as various synthesis methods, characterisation techniques and applications. A two-week short-term course on “Nanomaterials Synthesis and Characterization Techniques 2021” was designed and implemented by Department of Physics during 26th August to 8th September 2021 for Physics Chemistry Students, Research scholars and Faculty members.

The course was announced through online platforms one month prior to the commencement. An enormous response had received from the Physics (material science) students from all over India, including the UG/PG/Research students of several reputed Research Institutions, Central Universities, State Universities, Deemed Universities and Affiliated colleges as well as few students from abroad viz. M.A.H.E. Dubai Campus. In all 115 students registered for this course. After rigorous evaluation through the ten assessments 62 have found eligible for awarding the course completion certificate. The course was conducted totally through online platform as Video Lectures (You Tube) and Live Online Lectures (Zoom).

The expected outcomes of the course from the participants as mentioned below have confirmed through the evaluation of the assignments conducted during the course. The satisfaction of the students is reflected in their feedbacks about the course contents, content delivery, doubt solving and evaluation process.

Students learned through this course:

After completing the course the students equipped with basic understanding of the following.

- Selection of synthesis methods that can be best suited for developing nanostructured materials.
- Synthesis approach for fabrication of inorganic 0D, 1D, 2D nanostructures.
- Importance of nano materials over bulk materials.
- Size dependent physical and chemical properties of nanomaterials.
- Selection of characterization tools (*including X-ray diffraction, FTIR, UV-vis spectroscopy, electron microscopy techniques (SEM and TEM), etc*), to characterize nanomaterials.
- Students will be capable to perform stoichiometric calculations of chemical reaction.
- Analysis and interpretation of data related to X-ray diffraction, UV-VIS spectra, FTIR spectra and other structural parameters.



Coordinators



Head