

**MES Abasaheb Garware College Karve Road, Pune – 411 004**

**Department of Physics**

**Activity Report**

**A Short Term Certificate Course on Nanomaterials' Synthesis,  
Characterization and Analysis Techniques**

Considering the importance of Nanoscience and Nanotechnology, Department of Physics has organized A Short Term Certificate Course on “**Nanomaterials' Synthesis, Characterization and Analysis Techniques**” during **5<sup>th</sup> December 2021 to 6<sup>th</sup> February 2022**. This Course was inaugurated on the hands of Prof. (Dr.) M. A More, Emeritus professor, Department of Physics, Savitribai Phule Pune University, Pune, Principal Prof. (Dr.) P.B. Buchade and Vice-Principal & Head department of Physics Prof. (Dr.) Sunita Bhagwat on 3<sup>rd</sup> December, 2021. **Total 44 students registered for this course.** The Lectures were carried out through online teaching mode.

Total 40 lectures were conducted during this course. Dr. V.N. Dhage conducted 16 lectures, Prof.(Dr.) S.M. Bhagwat Conducted 08 lectures, Prof.(Dr.) S.M. Rathod conducted 04 lectures, Dr. P.R. Dusane conducted 02 lectures, Dr.B.J. Patil conducted 02 lectures & Dr. R.S. Patil conducted 08 lectures. Students from F.Y.B.Sc., S.Y.B.Sc. & T.Y.B.Sc. were registered for this course. During this course Introduction to Nanomaterials, Some Synthesis techniques viz. Sol-gel auto-combustion, Chemical Coprecipitation, Hydrothermal, Spray pyrolysis, Spin coating etc. techniques were discussed. XRD, SEM, TEM, VSM, FT-IR & UV-Vis Spectroscopy characterization techniques were studied. Analysis of the samples were explained through Microsoft Excel, Origin, ImageJ & Vesta software. The Subject/topic of Nanoscience & Nanotechnology was new for almost all the students. Students have gained a lot of knowledge regarding Synthesis, Characterization & Analysis techniques of Nanomaterials and this was reflected during evaluation process & from feedback.

The Evaluation of the students was carried out through Assignments, Presentation & Final examination. Dr.V.N. Dhage evaluated the assignments. Dr.V.N. Dhage & Dr.R.S. Patil have conducted the presentations of the students. Based on the overall performance **03** students has awarded the certificate with '**O**' grade, **27** students with '**A**' grade, **03** students with '**B**' grade & **11** students with '**C**' grade. Among all the students **Mr. Junaid Najiulla Shaikh & Ms. Uma Abhinav Paranjpe** has awarded the **Meritorious Students** based on the overall performance during this course.

**Dr.Vinod N.Dhage**  
**Co-Ordinator**

**Prof. (Dr.) Sunita Bhagwat**  
**Head, Department of Physics**