Course Type	Course Code	Name of Course	L	T	P	Credit
DE	NCYD510	Chemistry of Nanostructured Materials	3	0	0	3

Course Objective
● With this course students will learn various strategies for control synthesis of nanomaterials, their characterization and applications in various fields.
Learning Outcomes
● At the end of this course the student will able to: ● Identify special properties of nanomaterials. ● Conceptualize various synthetic routes for nanomaterial synthesis. ● Characterize nanomaterials by various analytic tools and identify their potential area of application.

Unit No.	Topics to be Covered	Lecture Hours	Learning Outcome
1	Introduction; fundamentals of nanomaterials science, surface science for nanomaterials, colloidal chemistry; Classical methods of Synthesis, preparation and fabrication of nanomaterials.	22L	In this unit the students will learn the basic concept of nanomaterials and preparation methods.
2	Shape and size control synthesis of nanomaterials. Recent advancement in Sonochemistry and other novel methods for Nanoparticle synthesis. Characterization of Nanomaterials. Potential applications of nanomaterials in various fields.	20L	In this unit the students will understand the basic concept of structure-property relationship of nanomaterials.
TOTAL		**42**	

Text Books:

1. Nanomaterials and Nanochemistry, C Brechignac, P. Houdy, M. Lahmani, Springer, 2006

Reference Books:

2. Principles of the Solid State, H. V. Keer, 1st Edition, New Age International Publishers, 2005.
3. The Chemistry of Nanomaterials: Synthesis, Properties and Applications, C. N. R. Rao, Achim Muller, Anthony K. Cheetham, Wiley, 2004.