

Department of Metallurgical and Materials Engineering
NATIONAL INSTITUTE OF TECHNOLOGY
TIRUCHIRAPPALLI-620015
(Even Semester for the Academic Year 2016-2017)

COURSE OUTLINE			
Course Title	Nanomaterials and Technology		
Course Code	MT 668	No. of Credits	3
Department	MME	Faculty	Prof.T. Srinivasa Rao J.Maya
Pre-requisites	At least one 600 level course related to materials		
Course Coordinator(s) (if applicable)			
Other Course Teacher(s)/Tutor(s) E-mail	tsrao@nitt.edu maya@nitt.edu	Telephone No.	7893150786 9488322106
Course Type	<input type="checkbox"/> Core course	<input checked="" type="checkbox"/> Elective course	
COURSE OVERVIEW			
<p>Concept of nanomaterials – scale/ dimensional aspects, top-down and bottom-up approached for preparing nanomaterials.</p> <p>Advantages and limitations at the nano level – thermodynamic aspects at the nan level, health and environmental issues.</p> <p>Characterization of nanomaterials and nanostructures, important characterization techniques for nano size measurement.</p> <p>Overview of properties of nanomaterials, introduction to nanocomposites, processing of nanocomposites.</p> <p>Applications in different areas such as semi-conductors, sensors, nano structured bioceramics and nanomaterials for drug delivery applications.</p>			
COURSE OBJECTIVES			
<p>To know the fundamental concepts of nanomaterials, synthesizing methods, their properties at nanoscale and possible technological applications in various fields of science and engineering.</p>			