



## **Gokaraju Rangaraju Institute of Engineering and Technology (Autonomous)**

### **Report of the Event**

Title of the Event: **STTP on Nano, micro and bulk materials processing and Nano technology**

Organized Date: 20<sup>th</sup> – 26<sup>th</sup> Mar 2017

Summary:

Nanotechnology is gaining importance rapidly as a most powerful technology. Its immense potential promises the possibility of significant changes in near future. Nano material processing and nanotechnology primarily deal with the synthesis, characterization, exploration and exploitation of nanostructured materials. These materials are characterized by at least one dimension in the nanometer ( $1\text{nm} = 10^{-9}\text{ m}$ ) range. Nanostructures constitute a bridge between molecules and infinite bulk systems. Individual nanostructures include clusters, quantum dots, nanocrystals, nanowires, and nanotubes, nano sheets. In automotive, aerospace, defence and sports industries the use of nano systems result in reduction in weight and size of the components which further increases the efficiency and comfort levels. As a result, ultra-light cars, trucks, trains, aircraft and spacecraft would use far less energy, especially with atomically smooth surfaces to reduce internal friction and air resistance losses. This course provided the theoretical & practical knowledge and experience in the field of Nano, micro and bulk material processing and nanotechnology.