

## **TEQIP SPONSORED**

### **FACULTY DEVELOPEMNT PROGRAM**

#### **MICRO/NANO MATERIAL REMOVAL AND ADDITIVE TECHNOLOGIES IN ADVANCED MANUFACTURING**

**28<sup>th</sup> July to 1<sup>st</sup> August 2014.**

A week long faculty development program was organised at Guru Nanak Dev Engineering College on the topic advancements in micro-manufacturing technology. The program was sponsored by World Bank aided project named as TEQIP for the enhancement of technical education quality. Dr. Sehijpal Singh coordinator of the program informed that around 50 faculty members from various engineering institutes of the country attended this program. The experts from various IITs, NITs and reputed universities shared their expertise during 17 technical sessions arranged in five days. Latest technologies for the manufacturing of medical implants, micro electro mechanical systems, and rapid prototyping techniques were introduced and demonstrated to the participants. The program was focused on the use of alternative energies in manufacturing for meeting the latest demands of industry and society. Dr. M.S Saini Director of GNDEC and Dr. Buta Singh Sidhu Dean, Punjab Technical University distributed the participation certificates to the delegates and congratulated the mechanical engineering department for the successful completion of the program.



## **COURSE CONTENTS**

- Overview of Micro- Manufacturing
  - Conventional and Non-conventional Manufacturing
  - Need and significance
  - Classification
  - Applications
- Micro and Nano removal of material by:
  - Single point diamond turning
  - Bonded Abrasives
  - Unbonded Abrasives
  - Electro Discharge
  - Electrolysis
  - Laser/Electron beam
- Micro and Nano addition of material by:
  - Nano Coatings
  - Microwave Processing
  - 3-D Printing
  - Fused Deposition Modelling
  - Selective Laser Sintering

#### **LIST OF EXPERT SPEAKERS**

1. Dr. P.M. Pandey, IIT Delhi
2. Dr. R.K Garg, NIT Jalandhar
3. Dr. Vivek Jain, Thapar University Patiala
4. Dr. Lakhbir Singh, BSBEC Fathegarh sahib
5. Dr. Sehijpal Singh, GNDEC Ludhiana
6. Er. A.P Sharma, Central Tool Room (CTR) Ludhiana
7. Dr. H.S Shan, Ex Prof., IIT Roorkee
8. Dr. Rupinder Singh, GNDEC Ludhiana
9. Dr. R.S Walia, Delhi Technological University Delhi
10. Dr. H.K Kansal, UIET Panjab University Chandigarh
11. Er. Dikshat Malhotra, K.M Polyester Buttons Pvt Ltd Ludhiana
12. Dr. Jatinder Kapoor, GNDEC Ludhiana

13. Dr. G.S Brar, GNDEC Ludhiana
14. Dr. A.K Sharma, IIT Roorkee
15. Dr. Inderdeep Singh, IIT Roorkee
16. Dr. Buta Singh, PTU Jalandhar
17. Dr. Harpreet Singh, IIT Ropar

Lab Visit:

Institute of Auto parts technology Focal point Ludhiana