

A Two Day Faculty Development Programme on

DESIGN AND MANUFACTURING OF COMPOSITE MATERIALS

(Under TEQIP-II)
25th – 26th , November, 2016

Department of Mechanical Engineering organized a Two Day Faculty Development Programme on “**Design and Manufacturing of Composite Materials**”. It was inaugurated by the Chief Guest Dr.Partha Ghoshal, Scientist “F” & Head, Electron Microscopy Group, DMRL, Hyderabad on 25.11.2016 at 9.30 AM. A total of 19 external participants and 59 internal participants registered for the program.



Dignitaries on the dais during Inaugural Session

In the morning session on 25.11.2016, Dr.Partha Ghoshal, Scientist ‘F’ & Head, Electron Microscopy Group, DMRL, Hyderabad delivered a keynote address on *“Characterization of Advanced Materials using Various Techniques”*.



Dr.Partha Ghoshal, Scientist “F” & Head, Electron Microscopy Group, DMRL, Hyderabad delivering a keynote address on *“Characterization of Advanced Materials using Various Techniques”*

In the afternoon session on 25.11.2016, Prof. G. V. S. Nageswara Rao, Department of Metallurgical and Materials Engineering, NIT Warangal delivered a lecture on *“Nanoparticle Reinforced Metal Matrix Composites (MMnCs)”*. He explained various strengthening mechanisms, effect of nano particles on physical and mechanical properties, processing methods and applications of MMnCs. During the session, participants interacted and got their doubts clarified.



Dr. G. V. S. Nageswara Rao, Professor, Department of Metallurgical and Materials Engineering, NIT Warangal, delivering a lecture on *“Nanoparticle Reinforced Metal Matrix Composites (MMnCs)”*

The second day (26.11.2016) of the FDP started with the lecture of Dr.N.N.Kishore, Professor, Dept. of Mechanical Engineering, IIT Tirupati on “*Prediction of Failure of Composite Laminate with Circular Holes using Continuum Damage Model*”. He introduced failure modes and failure criteria of composite materials and also explained damage model, finite element formulation and problem statement. Out of his experiences he gave some case studies to solve problems related to failure of composites.



Dr.N.N.Kishore, Professor, Dept. of Mechanical Engineering, IIT Tirupati, delivered a lecture on “*Prediction of failure of composite laminate with circular holes using continuum damage model*”.

The last session of the FDP was conducted by Dr.G.Sathish Babu, Professor, Dept. of Mechanical Engineering, JNTUHCEH, Hyderabad, on “*Composite Materials: Analysis and Design*”. He explained Macromechanical behavior of a lamina. He focused mainly on characteristics of a lamina, stiffness’s, compliances and Engineering constants for orthotropic materials. He also discussed various failure theories of composites.



Dr.G.Sathish Babu, Professor, Dept. of Mechanical Engineering, JNTUHCEH, Hyderabad, lecturing on “*Composite Materials: Analysis and Design*”.

During the valedictory function, Dr. K.C.Varaprasad, Head of the Department thanked all the participants for making the Faculty Development Programme a grand success. Dr.G.Sathish Babu, Convener of the program distributed the certificates to the participants.



Distribution of Certificates to the participants during Valedictory function