GLOBAL INITIATIVE ON ACADEMIC NETWORK (GIAN)

Ministry of Human Resources Development
Government of India

A Two weeks Course ON

Composite and Nano composite Materials - Metal, Ceramic, Polymer Matrix, as New Engineering and Structural Materials

11th July – 22nd July 2016

JNTUH College of Engineering Hyderabad
Kukatpally, Hyderabad – 500085
TELANGANA STATE

About GIAN:

Govt. of India approved a new program titled Global Initiative of Academic Networks (GIAN) in Higher Education aimed at tapping the talent pool of scientists and entrepreneurs, internationally to encourage their engagement with the institutes of Higher Education, viz., all IITs, IIMs, Central Universities, IISc Bangalore, IISERs, NITs and IIITs subsequently cover good State Universities where the spinoff is vast. The GIAN website may be visited for detailed information.

Overview

Composites are scientific and researched combinations of two or more different materials to adopt the better properties of the conjugate components and perform in a far better away than the individual components when used alone.structured combinations of continuous and discrete phases in which the stronger and stiffer discrete phase (reinforcement) is held in the weaker and softer continuous phase (the matrix) by interfacial bonding. Significant use in modern aircraft structural and non-structural applications such as in automotive, marine vessels, utility industry, sports, chemical industry, printed circuit board base and elsewhere.

Objectives

The primary objectives of the course are as follows:

- Exposing participants to the fundamentals of composites and nano composites aspects
- Building in confidence and capability amongst the participants in the application of composite and nano composites materials, tools, and mapping the composites fabrication organizational activities and problems in terms of structural engineering framework.
- Providing exposure to practical problems and their solutions, through case studies in composite materials application in engineering products.
- Enhancing the capability of the participants to identify, control and specialize in composites technology related applications / problems in engineering systems.

Benefits of Attending the Course:

Persons who have attended the course and followed the material should benefit in strengthening their background in the areas of materials preparation methods (Micro, macro and nano) and its characterizations.

Who should attend:

This course is intended to provide graduate students, teachers, and researchers working in aerospace, automotive, chemical, civil, mechanical engineering, and applied mathematics, and engineering physics. **For the participation in the course, registration with GIAN is mandatory.**
Registration to the portal is one time affair and will be valid for lifetime of GIAN. Once registered in the portal, an applicant will be able to apply for any number of GIAN courses as and when necessary. One time Non-refundable fee of Rs. 500/- is to be charged for this service. For registration, the website is: *www.gian.iitkgp.ac.in/GREGN/index*

Number of participants for the course will be limited to fifty.

Course Fee:

The participation fees for taking the course are as follows:

Participants from abroad	**:**US $500
Industry/ Research Organizations	**:** Rs.15000/-
Academic Institutions	**:** Rs.10000/-
Students	**:** Rs.2000/-
SC/ST students	**:** Rs.1000/-

There will be a concession of 50% of the fee for the faculty working in the constituent and affiliated colleges of JNTUH. The above fee include all instructional materials, computer use for tutorials and assignments, laboratory equipment usage charges, 24 hr free internet facility, Tea, Snacks, Lunch. The

participants will be provided with accommodation on payment basis.

Important Dates:

Last date for receiving applications: 01-06-2016
Course Dates 06th June – 17th June 2016

Evaluation and Grading:
There will be evaluation at the end of each module on the understanding of the concepts by the participant made during the course. Based on the evaluations finally a letter grade will be awarded to the participant. A completion certificate shall also be issued.

The Guest Faculty:

Prof Sri Bandyopadhyay is confidentially CATEI ranked by UNSW Australia relevant students as the Best Teaching Performer in UNSW Australia's a) School of Materials Science & Engineering, b) Faculty of Science, and c) the entire UNSW Australasia. Professor Sri Bandyopadhyay is also a high class researcher in the fields of composites and nanocomposites. In 2013 August, Australia's Campus Review management selected him as 1 of Top 5 Australian Innovators for his re-invention of coal power fly ash. Sri Bandyopadhyay is also the originator / chair of the world's one of the best brand of Composites conferences known as ACUN Conferences (Australia, Canada, USA, NZ) which happened on 6 occasions between 1999 and 2012 in UNSW and Monash Universities Australia. These ACUN conferences have been ranked by attending delegates from over 20 countries as among the 5 to 10 world conferences.
Sri Bandyoadhyay was earlier employed at Australian Defense Science & Technology Organization (DSTO) Materials Research Laboratory Melbourne, where he was given the Best Scientist Award for his innovative research on In-situ SEM deformation and fracture studies of polymers and polymer-matrix composites. Sri Bandyopadhyay has over 130 refereed research publications and 4 provisional patents/Intellectual Properties on new composite materials including metal matrix composites, polymer matrix composites and carbon nano tube composites. In Nov 2015, he is included as Inventor & Technical Advisor Enhanced Nanocomposites Finally, Prof Sri Bandyopadhyay was the initiator of today's Australia –India Science Research Funded scheme AISRF over $60M projects that started after Sri Bandyopadhyay approached India's 11Th President Dr APJ Abdul Kalam in 2004, and Dr Kalam was pleased to follow it through DST / Govt of India and Australia's then Prime Minister Mr John Howard through DIISR, Govt of Australia.

Course Coordinators:

Dr.B.Ramesh Chandra has a Masters and Ph.D in Metallurgy from IIT Kharagpur. He is presently working as Assistant Professor in the department of Metallurgical Engineering, JNTUH College of Engineering, Hyderabad. His area of specialization is Composite materials, Surface Engineering and Material Characterization. He has a teaching experience of 10 years and also published more than 15 research papers in reputed National and International journals.

Dr.P.Prasanna has a Masters and Ph.D in Mechanical from JNTU Kakinada. He is presently working as Assistant Professor in the department of Mechanical Engineering, JNTUH College of Engineering, Hyderabad. His area of specialization is Composite materials, Manufacturing and Machine Design. He has a teaching experience of 10 years and also published more than 10 research papers in reputed National and International journals.

About the Institute:
JNTUH College of Engineering Hyderabad, Kukatpally, Hyderabad since its inception in the year 1965 earned great reputation and fame not only in India but also all over the world. In 2008, when JNTU is divided into four universities by the Ordinance of the Govt. of A.P., the college is retained as a constituent college of JNT University Hyderabad and was renamed as JNTUH College of Engineering Hyderabad.

Contact Information:

Course Coordinators:

Dr.B.Ramesh Chandra., Assistant Professor
Department of Metallurgical Engineering
JNTUH College of Engineering Hyderabad
Hyderabad – 85.
Mail id: brc@jntuh.ac.in
Mobile: 9849746021

Dr. P. Prassana, Assistant Professor
Department of Mechanical Engineering
JNTUH College of Engineering Hyderabad
Hyderabad – 85.
Mail id: prajntu@jntuh.ac.in
Mobile: 9885178361

Local Coordinator, GIAN:

Dr. G .Krishna Mohana Rao
Professor of Mechanical Engineering &
JNTUH College of Engineering
Mail id: kmrgurram@jntuh.ac.in