A Short Term Course on ADDITIVE MANUFACTURING
February 05 – February 09, 2018
(Application form should contain the following Information. It should be printed (not hand written) on A4 size paper)

Name: 
Position: 
Department: 
Institution/Organization: 
Address: 
E-mail Address: 
Mobile No.: 

Educational Background (starting from B.E./B.Tech):

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<th>Degree</th>
<th>Field of Specialization</th>
<th>Institution</th>
<th>% marks/CGPA/CPI</th>
<th>Year</th>
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Areas of Research Interest: __________________________

Have you attended any course on “Additive Manufacturing” at IITK or elsewhere: Yes / No 
(If yes, please give details……………………………………………….)

Note: Candidates from the teaching institutions should send the demand draft only after getting the confirmation of their selection.

Payment details
Demand draft no.________ dated__________
Amount in Rs.________ drawn at___________

*IMPORTANT DATES

For College Teachers

- Receipt of application through email: Dec. 25, 2017
- Information to the selected candidates: Jan. 04, 2018
- Receipt of the draft: Jan. 15, 2018

For Participants from Industries and R&D Labs

- Receipt of application through email: Jan. 05, 2018
- Information to the selected candidates: Jan. 14, 2018
- Receipt of the draft: Jan. 21, 2018

ADDRESS FOR CORRESPONDENCE

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INTRODUCTION
An intensive course on Additive Manufacturing will be offered from February 05 to February 09, 2018, under the Continuing Education Programme of I.I.T. Kanpur. It is sponsored by Quality Improvement Programme, All India Council of Technical Education, New Delhi. The course is designed to cater the needs of teachers, scientists from R & D houses and Labs, and practicing engineers from industries. This programme will be specifically useful for persons who are concerned with training / teaching, research, and industrial applications of additive manufacturing, manufacturing of complex parts, CAD for additive manufacturing, bio-additive manufacturing, modelling, to name a few.

OBJECTIVE
Additive Manufacturing (AM) is a process of joining materials to make objects from 3D model data, usually layer upon layer, as opposed to subtractive manufacturing methodologies, such as traditional machining. The basic principle of AM is that a model, initially generated using a three-dimensional Computer Aided Design (3D CAD) system, can be fabricated directly. AM technologies have significantly evolved over the last decade. Because of their potential to extensively transform the nature of manufacturing processes, e.g., by enabling “Freedom of Design” several industries have been attracted by these technologies. Using AM, manufacturing of highly complex parts can be an economically viable alternative to conventional manufacturing technologies.

The primary objective of the present course is to acquaint the participants with the concept of AM, various AM technologies, materials science aspect for AM, modelling of AM processes, and their applications in various fields. Towards modelling in AM, relevant case studies have been included to expose the participants to the mathematical models for AM to describe the transport phenomena such as heat/mass transfer and fluid flow. The course will also cover AM process plan including building strategies and post-processing.

COURSE CONTENT
- Introduction to Additive Manufacturing
- CAD for Additive Manufacturing
- Material Science Aspects in Additive Manufacturing
  Different materials used in AM, Use of multiple materials, multifunctional and graded materials in AM, Role of solidification rate.
- Various Additive Manufacturing Processes
  Powder-based AM processes involving sintering and melting, Printing processes (droplet based 3D printing), Fused deposition modelling (FDM), Laminated object manufacturing, Stereolithography, Micro- and nano-additive manufacturing processes.
- Modelling in Additive Manufacturing
  Transport phenomena models: temperature and fluid flow, molten pool formation, Various case studies - modelling of fusion based AM process, powder bed melting based process, droplet based printing process.
- Applications of Additive Manufacturing
  Additive Manufacturing in Aerospace, Automotive, Electronics industries and Biomedical applications.

FACULTY
Speakers shall be drawn from various disciplines of different IITs and other institutions of higher learning, and related industries and R&D organizations of different parts of the country.

COURSE FEE
FOR COLLEGE TEACHERS ONLY
There is no course fee for the sponsored teachers from engineering colleges [only those approved by AICTE, New Delhi]. They will be paid to and fro 3rd AC class train fare via shortest route (strictly on production of ticket), and free boarding and lodging in the hostel of IIT Kanpur. The applications of the teachers from the accredited colleges should reach the course coordinator latest by 25th Dec, 2017 giving the information as shown in the Proforma. The engineering College teachers are required to send hard copy applications duly recommended by the Head of the Institution/Department. The candidate should have minimum qualification as B.E. / B.Tech. / B.Sc. (Engineering). However, candidates with M.E. / M.Tech. / M.Sc. (Engineering) will be given preference. The candidates with Ph.D. degree with manufacturing specialization are most welcome, and will be given highest priority.

FOR THE SELECTED CANDIDATES: The selected candidates will have to send a refundable caution deposit of Rs. 1,000/- to ensure their commitment for participation in this course. This amount will be refundable only to those teachers who attend the course (Please do not send the money until you get selection letter / e-mail). Please write your name on the back of demand draft.

MODE OF PAYMENT
The registration fee or refundable caution money deposit should be sent by bank draft payable at the “State Bank of India, IIT Kanpur” Branch and drawn in favor of “MFS Course”.

The list of the selected candidates will also be displayed on the home page of the coordinators, as given below.

Home page: http://home.iitk.ac.in/~arvindkr/ http://home.iitk.ac.in/~nsinha/