

AICTE (QIP) Sponsored Short Term Course On

Near Net Shape Processes for Metallic and Biocompatible Materials - The Smart Manufacturing Approach

March 02-06, 2020



Organized by

Mechanical Engineering Discipline
PDPM

Indian Institute of Information
Technology, Design and
Manufacturing, Jabalpur - 482005, India

Course Objectives

The course focuses on two of the disruptive innovations the last decade has been witnessed to – Internet of Things (IoT) and Additive Manufacturing (AM) (or 3D Printing). These technologies have huge potential to shape the future of mankind. Smart manufacturing, being an important aspect of Industrial Internet of Things (IIoT) is the next industrial revolution. Smart manufacturing integrates data and information from multiple open and vendor applications and products to form new solutions. It can be applied to a single machine line, an entire factory or across a network of suppliers and customers. This new area of innovation will optimize the entire manufacturing industry to create higher quality products, improve productivity, increase energy efficiency, and sustain safer plants. The course is designed to provide a bird's eye view of various tools and techniques associated with IIoT, Smart Manufacturing, with special focus on metal additive manufacturing and near net shape manufacturing of biocompatible materials.

Intended Participants (Who can attend?)

This course is tailor designed for the persons, who are associated with training / teaching, research, and industrial applications of smart manufacturing of metallic components, and specifically biocompatible materials. The course will be equally beneficial to Mechanical Engineers, Production Engineers, Computer Scientists and Engineers and Electrical / Electronic Engineers.

The teachers of the AICTE approved Engineering Colleges are eligible under this scheme. Faculty members from the streams of Mechanical, Electrical, Computer Science and Electrical / Electronics & Communication Engineering can apply under this program. The seats are limited, which would be filled on first come first serve basis and the candidate's field of research interest.

Course Contents

- Introduction to Internet of Things (IoT) / Industrial Internet of Things (IIoT)
- Various aspects of IIoT
- Introduction to Cloud Computing
- Introduction to Open Source Software IoT/ Cloud Computing
- Smart Manufacturing approach
- Additive Manufacturing
- Various techniques of Metal Additive Manufacturing
- Dieless Manufacturing
- Hybrid Manufacturing Processes
- Metal Injection Moulding
- Material Science Aspects of Additive Manufacturing
- Introduction to Bio/Biodegradable Materials
- Near Net Shape manufacturing of Biocompatible materials
- Role of NDT in AM

Course Coordinators

Prof. Puneet Tandon

Dr. Ponappa K.

Invited Talk

Prof. Alexander Pesin, NMSTU, Russia

Prof. V.K. Jain, IIT Kanpur

Prof J. Ramkumar, IIT Kanpur

Application Form

Short Course on

Near Net Shape Processes for Metallic and Biocompatible Materials - The Smart Manufacturing Approach

(March 02-06, 2020)

Name: _____

Title/Position: _____

Organization: _____

Sex: Male/Female _____ (for accommodation)

Mailing Address: _____

Phone(s): _____

Email: _____

Areas of interest: _____

Accommodation Required: Yes / No

Participant Signature: _____

Forwarded by Head of Institution:

Registration Procedure

How to apply?

AICTE Sponsored Candidates: There is no course fees for sponsored teachers from engineering colleges (only those approved by AICTE), however, application in the attached form should be mailed to the coordinator, with a caution deposit of Rs. 1,000/- (Rs. One Thousand only) through Electronic bank transfer (Mentioned below). The caution deposit fee will be refunded for all participants who attend the course.

Student / Industrial participants can email the filled application form along with appropriate registration fee (Rs. 1,000 / Rs. 5,000) to the Coordinator (Prof. Puneet Tandon). The registration fee can be paid only through online.

Course fee

- 1) AICTE Sponsored candidates: Rs. 1,000/- (Refundable)
- 2) Students: Rs. 1,000/- (Nonrefundable)
- 3) Industrial Participants: Rs. 5,000/- (Nonrefundable)

The decision regarding the acceptance for the course will be taken by the Coordinators after receiving the duly completed application with appropriate online payment before the mentioned deadline.

Bank Account Details

Name of the Account:

QIP PDPM IIITDM JABALPUR

Account Number: 50388395415

IFSC: ALLA0212433

Name of the Bank: Allahabad Bank

Deadlines

Last date of receipt of registration form along with course fee **Monday, February 24, 2020**

Announcement of the shortlisted candidates **Tuesday, February 25, 2020**

Travel & Accommodation

For all shortlisted candidates' accommodation and local hospitality will be provided in student's hostel (guest rooms) / Institute Visitor Hostel. Bus facility is available to and fro from railway station at different timings.

Selected candidates will be entitled for to- and- fro sleeper class or III AC railway fare by shortest route. Local transport by auto rickshaw from Jabalpur railway station/Bus stand to PDPM IIITDM Jabalpur on these days of arrival and departure will be refunded (limited to Rs 300/-). Local participants will be given TA charges as per the Institute rules (limited to Rs 300/- per day)

Contact details:

Prof. Puneet Tandon

PDPM IIITDM Jabalpur

Dumna Airport Road.

Jabalpur. 482005, Madhya Pradesh, India

Tel: +91-761-2794411, Ext: 4411

Email: ptandon@iiitdmj.ac.in

<https://www.iiitdmj.ac.in/me.iiitdmj.ac.in/>

<https://www.iiitdmj.ac.in/QIP.php>