QIP CENTRE
IIT(BHU)

QIP Short Term Course on

ENGINEERING INNOVATION & PRODUCT DEVELOPEMENT THROUGH GREEN MANUFACTURING

February 22-28, 2020

Course Coordinator:
Professor Santosh Kumar (ME Dept.)
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Course Co-Coordinators:
Dr. S. K. Mahto (Bio-Medical Eng. Dept.)
Dr. O. P. Singh (ME Dept.)
Dr. Moh. Imteyaz Ahmad (Ceramics Eng Dept.)

Organized by

Department of Mechanical Engineering, IIT (BHU) Varanasi (UP) India 221005

Objective of the course:
Global competitiveness and continued development of Indian economy require a strong national effort through innovative research & development, emerging green manufacturing technology converts natural resources into useful products keeping in mind sustainable manufacturing ecosystem(economic, societal needs &Environment).The QIP course on Engineering innovation & product development through Green Manufacturing' will focus on theory & practical contents of innovative product development & manufacturing converting digital manufacturing, computer Aided Design, Topology & Optimization, bio-medical devices, micro-electronics, pharmaceutics, ceramics etc.in an innovative manner.

Course Content:
1. **Introduction to Green Manufacturing (GM): Social, Business & Policy Environment, principles of GM (1.1-1.2)**
2. **Innovation & Product Design & development & 3D Printing (2.1-2.4)**
3. **Digital Manufacturing &Computer Aided Design (3.1-2.3)**
4. **Topology & Optimization (4.1-4.2),**
5. **Applications & case studies (bio-medical devices, micro-electronics, pharmaceutics, ceramic etc.) (5.1-5.3)**

Target Audience:
Faculty members of University / Engineering colleges approved by AICTE working in the Dept. Of MechanicalEngineering/Metallurgical, Materials science, Ceramic Engineering, Physics, Chemistry / Mathematics and other allied departments related to the mentioned area are eligible to attend the course.

Venue: Additive Manufacturing Laboratory, Department of Mechanical engineering/ ABLT-1, IIT (BHU) Varanasi

How to Register: No registration fee will be charged from the participants. Registration in the program is on **First Come First Serve** basis. To register visit& fill: https://forms.gle/BdrdsAToMAaEShPw8

Registration Process
By Email – Scanned copy of the filled inapplication form duly endorsed by the forwarding authority to be mailed at santosh.kumar.mec@itbhu.ac.in by Dec 28, 2019. Application format is given inthis brochure. The participants have to send a demand draft for Rs. 2000 /- drawn on any nationalized bank in favor of "Registrar, IIT (BHU), Varanasi" to the course coordinators by Dec 25, 2019 as a caution fee for confirmation of their participation. The cautionfee will be returned only if the participant joins the course and attends the full course.

Accommodation:
Limited number of Participants (30) from AICTE approved engineering institutions will be eligible for to and fro railway fare via shortest route in III AC class and free lodging and boarding in the Institute guest house/hostels during course period. Candidates attending the course in full only will be eligible for TA. For all other participants no TA will be paid by IIT (BHU) Varanasi.

Speakers:
Subject experts will be drawn from premier institution like IITs, NITs, IISc and other reputed research institutes /DRDO-CSIR Laboratory etc.

About Varanasi:
The holy city of Varanasi is the oldest living city in the world which is also known as the Capital of the Spiritualistic world. The city has a great historical and cultural importance. This religious and cultural capital of India is situated at the bank of the holy river Ganges and is famous for temples of Lord Shiva, Buddha (Sarnath) and SankatMochan etc. Varanasi is the premiere & mostly place of oriental learning and simultaneously keeping pace with modern advanced knowledge. The vibrant city with its multiple dimensions of knowledge and liberation has a magnetic attraction for people all over the world.

About Institute:
The Indian Institute of Technology (Banaras Hindu University) owes its existence to MahamanaPandit Madan Mohan Malviya, Bharat Ratna-the founder of the first residential university of modern India, the Banaras Hindu University. The three of the erstwhile engineering colleges of BHU, namely BENCO, MIN-METand TECHNO, were merged to form the Institute of Technology (IT-BHU) in 1968 to provide an integrated educational base. The IT-BHU has been admitting students through the JEE conducted by the IIT's since 1972, and has been consistently ranked amongst the top few engineering institutions of the country. IT-BHU became IIT (BHU) in June 29, 2012 by an Act of Parliament. The Institute has maintained high academic standard since its inception. It has turned out luminary engineers and administrators who served the nation with great distinction. ME department is oldest one which started in 1919.

How to Reach:

The city of Varanasi is well connected by road, rail and air with all the important cities of India. Regular flights are there from Varanasi to Delhi, Mumbai, Chennai, Hyderabad, Bangalore, Kolkata, Khajuraho and Lucknow. The IIT (BHU) campus is about 12Km from Varanasi Cantt and 20Km from Mughalsarai railway station and 38 Km from the Babatpur (Varanasi) airport.

Course schedule:

Dates/TIME	10.00 to 11.30AM	11.30 to 12.00PM	12.00 to 1.30PM	1.30 PM to 2.30PM	2.30 PM to 4.00PM	4.15PM to 4.30PM
Feb 22 SAT	x	TEA BREAK	x	LUNCH BREAK	Registration & Inaugural	TEA BREAK
Feb 23 SUN	LEAVE		LEAVE		LEAVE	
Feb 24 MON	Session 1 Topic 1.1 (SK)		Session 2 Topic 1.2 (DRDL/DRDO)		Session 3 Topic 2.1 (SK)	
Feb 25 TUE	Session 4 Topic 2.2 (SK)		Session 5 Topic 2.3 (IITB)		Session 6 Topic 2.4 (CS)	
Feb 26 WED	Session 7 Topic 3.1 (KS)		Session 8 Topic 3.2 (SK)		Session 9 Topic 3.3 (KS/SK/SKM)	
Feb 27 THU	Session 10 Topic 4.1 (YKR/ DG)		Session 11 Topic 4.2 (DG)		Session 12 Topic 5.1 (OPS)	
Feb 28 FRI	Session 13 Topic 5.2 (SKM)		Session 14 Topic 5.3 (IMA)		Valediction	

Chief Patron:

Prof. PramodKumarJain, Director
Indian Institute of Technology (Banaras Hindu University) India

Patron:

Prof. S. K. Srivastava, Chairman QIP Centre IIT (BHU)

Chairman:

Prof. A. P Harsh, Dept. of Mechanical Eng. IIT (BHU)

Indian Institute of Technology (BHU), Varanasi

Department of Mechanical Engineering

Registration Form

Engineering Innovation & Product Development through Green Manufacturing

February 22-28, 2020

1. Name .....
2. a) Age ..... b) Sex: M/F .....
3. Designation .....
4. Organization .....
5. Address for correspondence

.....

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E-mail..... Phone/Mobile.....

6. Highest academic qualification.....
7. Specialization .....
8. Category of participant

_ Sponsored participant from AICTE approved institutions Yes No

9. IIT (BHU) accommodation required Yes No
10. Payment details

Amount (Rs.) .....

Demand Draft number .....

11. * Bank A/c no. & Branch Name ..... & .....
12. *IFSC Code of Bank.....
13. * PAN No. .....

Please register me for the course on **Engineering Innovation & Product Development through Green Manufacturing** to be held at Department of Mechanical Engineering, IIT (BHU) Varanasi.

Date.....

Place ..... Signature of the Participant

SPONSORSHIP

Prof./Dr./Mr./Ms./Mrs./.....is an employee of our institute and his/her application is hereby sponsored. The applicant will be permitted to attend the short-term course "Engineering innovation & product....Green manufacturing" at IIT (BHU) Varanasi during **Feb. 22-28, 2020** selected.

Date: Signature of Sponsoring Authority

Designation:

Official Seal:

(*Required for Online payment of TA/DA)