

## Introduction

Precision Manufacturing and circular economy is important for all branches of engineering. Linear manufacturing model helps in creating quality products that meet customer needs in efficient, safe and cost-effective manner. Unlike the linear production model, the circular economy operates on the premise that resources are finite and takes into consideration environmental, social and governance costs. The goal of circular economy is to find ways for elements of the used or discarded end-product to find their way back into the production process. This FDP program is taught by faculty who are having expertise in their field. They combine a wide range of work experience and academic achievement that enables them to provide an exceptional classroom and lab environment. This course is focused to create an avenue to the participants to have an exposure in the fields of precision manufacturing special focus on circular economy. The short-term course is being organized with the following objectives:

- To create awareness on various precision manufacturing technology and its impact on circular economy.
- To impart fundamental as well as advanced knowledge of some of these areas to potential users, teachers and researchers.
- The course also aims at providing a brief introduction to Optimization techniques, Maintaining product, Re-using/redistributing (used) product, Upgrading/ remanufacturing product, Recycling product and Green Manufacturing.

## Course Contents

Precision Manufacturing: Introduction and

Scope; Micro/Nano Machining Processes: applications and recent trends; Micro/ Nano finishing Processes: need of present manufacturing scenario; Modern Protective Coatings: Techniques, Inspection and Maintenance; Welding Technologies: Latest Advances and Future Prospects; Modern Metal Casting: Materials and Processes; Circular Economy: Maintaining product, Re-using/redistributing (used) product, Upgrading/ remanufacturing product, Recycling product; Future trends in Manufacturing: life cycle assessment, re-manufacturing, and closed loop supply chain management; Green Manufacturing: Energy and Environmental impact; Scope of alternative energy for manufacturing: Wind and Solar; Process Optimization: Design of Experiments.

## Resource Persons

Experts from reputed IITs/NITs, central universities, leading industries and R & D Organizations will be invited to deliver the lectures.

## Participants

The programme is open to the faculty/ Research Scholar/ PG / UG Students of AICTE/UGC approved engineering Institute/ University and the persons from industries working in the area of Manufacturing circular economy and related fields.

## Registration

Registration form in the prescribed format should reach the Coordinator on or before **14th May 2018**. To avoid any delay in this, the applicants may send an advance copy before the due date. The selection letter will be sent

only through e-mail, on or before **21st May, 2018**.

## Accommodation and Travel

Accommodation for pre-registered delegates can be arranged in campus (guest house or hostel) / hotel on request. The delegates will have to bear the expenses. As per TEQIP-III guidelines, TA/DA of the participant will not be permitted. However, official lunch/tea will be provided during the course.

## About DTU, Delhi

Delhi Technological University, also referred to as DelTech, was established in 1941 as Delhi Polytechnic. Later called Delhi College of Engineering, the college was under the government of the National Capital Territory of Delhi since 1963 and affiliated to the University of Delhi since 1952. In July 2009 DCE was upgraded to a state university and renamed Delhi Technological University. It offers courses towards B. Tech, M. Tech, MBA, and Ph.D. and contains 14 academic departments with a strong emphasis on scientific and technological education and research. The essence has always been the same - to quench the thirst of knowledge and work towards the better future of the country. The whole and sole motive of DTU has been to leave no stone unturned to spread knowledge far and wide.

## About Mechanical Engineering Department

The department of mechanical engineering is the biggest department of the University. It offers three degrees and four PG program and more than 100 research scholars have been registered in Ph.D. program. All the laboratories of the department are equipped with latest state of art equipments.

## APPLICATION FORM

TEQIP-III sponsored  
Faculty Development Programme on

## Precision Manufacturing and Circular Economy (PMCE-18)

4th -8th June 2018

1. Name:
2. Date of Birth\Age:
3. Designation :
4. Institution:
5. Whether the institution has AICTE/UGC approval  
(Yes/ No) \_\_\_\_\_
6. Address for correspondance :  
E-mail:  
Mobile:
7. Educational qualifications:
8. Experience (in years)  
Teaching  
Industry  
Research
9. Accommodation Required ( Yes/ No)

### Declaration

*The information provided is true to the best of my knowledge. If, selected, I agree to abide by the rules and regulations of the course and shall attend the course for the entire duration. I also undertake the responsibility to inform the Coordinator in case, I am unable to attend the course.*

Place:

Date: Signature

## SPONSORSHIP CERTIFICATE

Dr/Mr/Mrs/Ms-----  
----- is an employee/ RS of our institute and is hereby sponsored to participate in the Faculty Development Program on Precision Manufacturing and Circular Economy (PMCE-18).  
Place:

Date: Signature of Head of Institution

### Mail the Registration form to:

Prof. R. S. Walia and Prof. Qasim Murtaza  
Course Coordinators  
Department of Mechanical Engineering,  
Delhi Technological University,  
Shahbad Daultapur, Delhi-110042  
Email Addresses: waliaravinder@ya-  
hoo.com, qasimmurtaza@gmail.com  
Cell: +91-9717325233, +91-9654364948

### Organizing Committee:-

Chairman: Prof. Vipin, HoD (Mech.), DTU  
Coordinators:  
Prof. R S Walia:- +91-9717325233  
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Prof. Rajesh Kumar:- +91-8750632739  
Dr. Pushpendra Singh:- +91-9958956906  
Dr. S.M. Pandey:- +91-9213245684

*For further details visit university's Website at [www.dtu.ac.in](http://www.dtu.ac.in) . Brochure can be downloaded by the link provided.*

Faculty Development Programme  
on

## PRECISION MANUFACTURING AND CIRCULAR ECONOMY (PMCE-18)

4th -8th June 2018

Funded by  
Technical Education Quality Improvement Program-III



**Chairman**  
Prof. Vipin

### Coordinators

Prof. R.S. Walia  
Prof. Qasim Murtaza  
Prof. Rajesh Kumar  
Dr. Pushpendra Singh  
Dr. S. M. Pandey

### Organized by

Department of Mechanical, Production and  
Industrial & Automobile Engineering  
Delhi Technological University  
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