



## AICTE - ISTE Sponsored One Week Online Induction / Refresher Programme on SURFACE ENGINEERING & COATINGS: FUNDAMENTALS, PRACTICE & APPLICATIONS

February 16-22, 2022, | Online | 10:00 – 16:00

### SOURCES OF INSPIRATION



**Prof. Anil D. Sahasrabudhe**  
Chairman,  
AICTE



**Sh. Vikas Garg, IAS**  
Vice-Chancellor,  
IKGPTU, Kapurthala



**Prof. Buta Singh Sidhu,**  
Vice-Chancellor,  
MRSPTU, Bathinda



**Dr. P. K. Desai**  
President,  
I.S.T.E.



**Prof. Harpreet Singh**  
Mech. Engg. Department  
I.I.T. Ropar

### ABOUT I.K.GUJRAL PUNJAB TECHNICAL UNIVERSITY, KAPURTHALA

It was established as State Government University by Act No. 1 in 1997 as Punjab Technical University. Subsequently, in the year 2015 this university was renamed as I.K. Gujral Punjab Technical University by the State Government in the honor to Late Sh. Inder Kumar Gujral, Former Prime Minister of India. The University was only an Affiliating University and offering distance education courses till 2012. The campus teaching departments got started in the year 2016 with different courses in the field of Engineering, Management, Sciences and Journalism. The university has four campuses, 211 affiliated colleges and offering more than 150 courses for more than one lac students.

The Key features about IKGPTU includes:

- All India NIRF Ranking 54<sup>th</sup> in 2016, 96<sup>th</sup> in 2019, 104<sup>th</sup> in 2020 and 120<sup>th</sup> in 2021.
- The first university in the state of Punjab to have 100% online admission system (from registration to reporting).
- Transparent-IT based Examination system
- Best Technical University Award for the year 2013.
- Highly experience Faculty with Ph.D.
- Best Technical University Promoting High Quality Research at Master's and Doctoral Thesis Work
- eINDIA 2010 Award of the Year as "ICT Enabled University of the Year. "
- Student centric vibrant environment and state-of-the-art infrastructure spread over 78 acres of land.

### ABOUT MECHANICAL ENGINEERING DEPARTMENT

The Department of **Mechanical Engineering** was established in the year 2016 and is currently providing the undergraduate program with intake 60 and Post Graduate Program with intake 18. All the Mechanical Engineering Labs are well equipped with latest machines / technology & a central workshop and provide the friendly environment to the learners. The Faculty is highly experienced, educated and always play a main role in developing the skills of the students.

**Surface Engineering** is the sub-discipline of Mechanical Engineering. The surface phase of a solid interacts with the surrounding environment and this interaction can degrade the surface phase over time. Environmental degradation of the surface phase over time can be caused by wear, corrosion, fatigue and creep. **Corrosion of metals** costs approximately **Rs. 24000 crores (Rs. 240000 million) to India** due to materials corrosion in building structures, bridges, chemical plants, offshore platforms, power plants, ships, pipe lines for transportation of hydrocarbon, electrical and electronics components as reported in IIM Metal News. It is estimated that corrosion-related costs can be reduced more than 30% by development and use of better corrosion control technologies. Corrosion control measures include corrosion inhibitors, cathodic protection and **coatings**. Therefore, the development of wear and corrosion protection systems is a very important topic from both engineering and an economic perspective.

**EXPECTED OUTCOMES**

On successful completion of this Course; the participants will be able to:

- Demonstrate understanding of the concepts of surface engineering.
- Demonstrate a sound knowledge for the systematic application of alternative technologies used to fabricate coating systems.
- Demonstrate knowledge and critical awareness of plasma/surface interactions and their relevance to industry.
- Evaluate the microstructure characteristics used to describe materials.
- Demonstrate knowledge and critical awareness of the techniques used to characterize the surface and the principals behind their operation.
- It will provide an opportunity to be taught by experts and share experiences with co-participants across India.

**RESOURCE PERSONS**

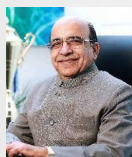
The course will be conducted by highly qualified and experienced experts from the organizations like IIT Madras, Chennai, IIT Ropar, Rupnagar, IKGPTU Kapurthala, Punjabi University Patiala, MNIT Prayagraj, NITTTR Chandigarh, LPU Phagwara, BBSBEC Fatehgarh Sahib, DAV University, Jalandhar, GIET, Ahmedabad, MGM, Mumbai and Industry Experts from Jodhpur and Coimbatore. The resource persons have been chosen to bestow the participants with a blend of theoretical and practical knowledge reinforced with their research experience in managing different aspects of the Surface Engineering.



**Prof. Buta Singh Sidhu,**  
Vice-Chancellor,  
MRSPTU, Bathinda



**Prof. Harpreet Singh**  
Mechanical Engg.  
I.I.T. Ropar



**Dr. Rajneesh Arora**  
Managing Director,  
AGC, Amritsar



**Dr. Sushanta Kumar Panigrahi**  
I.I.T. Madras, Chennai



**Dr S. B. Mishra,**  
MNIT, Allahabad,  
Prayagraj, U.P.



**Prof. Niraj Bala,**  
NITTTR,  
Chandigarh



**Dr. Ramesh M.R.,**  
N.I.T., Surathkal,  
Karnatka



**Dr. H. N. Shah,**  
Gandhinagar Institute of  
Technology,  
Gandhinagar, Gujrat



**Dr. Subash Kamal**  
MGM's College of  
Engineering &  
Technology, Mumbai



**Dr. Rohit Upadhaya,**  
App. Devt. Manager,  
Praxair Surface  
Technologies,  
Coimbatore





**Dr. Satish Tailor**  
Chief Scientist & GM-R&D,  
Metallizing Equipment Co.  
Pvt. Ltd., Jodhpur



**Dr. Manpreet Kaur**  
BBSBEC, Fatehgarh  
Sahib



**Dr. Ravinder Pal Singh,**  
Lovely Professional  
University, Jalandhar



**Dr. Gagan Deep Aul**  
D.A.V. University  
Jalandhar



**Prof. Vikas Chawla**  
Dean (Acad) / Prog.  
Coordinator  
IKGPTU, Kapurthala

### WHO CAN APPLY ?

The Faculty Members / Researchers and Industry People of related disciplines are eligible to apply.

### HOW TO APPLY

The interested participants can apply online using the link:

<https://ptu.ac.in/aicte-iste-sponsored-one-week-online-induction-refresher-programme-february-16-22-2022/>

For any query, please communicate at:

[vikas.ikgptu.fdp@gmail.com](mailto:vikas.ikgptu.fdp@gmail.com)

The shortlisted candidates will be informed as on **12th February, 2022** via E-mail. The seats are limited (on FCFS basis).

### REGISTRATION FEE

There will be no registration fee for the course.

### PROGRAMME CO-ORDINATOR



**Prof. (Dr.) Vikas Chawla,**  
Professor, Mechanical Engineering Department /  
Dean Academics,  
I.K.G. Punjab Technical University,  
Kapurthala, Punjab

Email: [vikas.chawla@ptu.ac.in](mailto:vikas.chawla@ptu.ac.in)  
WhatsApp: +91-9417953530

### ORGANISING TEAM

**Prof. (Dr.) Neelkanth Grover, Professor**  
Mechanical Engineering Department,  
Main Campus, IKGPTU

**Dr. Deepak Kumar Goyal, In-charge**  
Mechanical Engineering Department,  
Main Campus, IKGPTU

**Dr. Nitya Sharma, Dy. Controller**  
Academics Department,  
IKGPTU



**I. K. Gujral Punjab Technical University,**

**Kapurthala-Jalandhar Highway,  
Kapurthala-144603 (Punjab) India**