

Completed Registration form along with 1-page write-up (on reasons to attend this course) should be sent by Email to [singhrupinder@gndec.ac.in](mailto:singhrupinder@gndec.ac.in)

**Dr. Rupinder Singh**  
Course Coordinator

**Pf. Manjot Singh Bedi**  
Course Co-Coordinator

Department of Production Engineering  
Guru Nanak Dev Engineering College,  
Ludhiana, Punjab, 141006

Please send single email with attachments as:

(a) the 1-page write-up and (b) scanned copy of the filled-in and signed form. The title of the email should be "QIP course on Tribological analysis of four dimensional printed engineering materials".

### **IMPORTANT DATES**

**Deadline for submitting Application: 14 Nov., 2018**  
**(Scanned copy via Email only)**

**Notification of Acceptance: 15 Nov., 2018**  
**Course Dates: 19 – 24 Nov., 2018**

- Incomplete application forms will not be entertained.

### **VENUE FOR COURSE**

Seminar Hall, Central Workshop, GNDEC, Ludhiana.

### **DATE & TIME FOR REGISTRATION**

Nov. 19, 2018, 9 AM at the venue for the course.

### **ELIGIBILITY**

Faculty members (Engg. discipline) of degree level engineering colleges recognized by AICTE/UGC/MHRD are eligible to attend the course. Research scholars and Industry/ R&D personal will also be considered subject to seats availability.

### **COURSE EVALUATION**

Successful participants would be awarded 'Course Completion Certificate'.

### **REGISTRATION**

There is no registration fee for the course. All short-listed candidates are required to confirm their participation by sending a Cheque/Demand Draft of Rs. 1000/- in the name of "PRINCIPAL, GNDEC, Ludhiana".

The above amount will be refunded to the participant if he/she attends the course. In case a participant does not attend the course, the above amount will be forfeited. Shortlisting and confirmation of eligible candidates will be on a first come first served basis up to a maximum of 30 candidates.

### **TRANSPORT, BOARDING & LODGING**

Participants are entitled for II class (Sleeper Class) or AC railway fare to and fro by the shortest route from college to GNDEC, Ludhiana. Accommodation will be provided in the students Hostels or Guest House on sharing basis.

### **CHIEF PATRON**

Dr. Sehijpal Singh

### **FACULTY COORDINATOR**

Dr. Jasmaninder Singh Grewal

### **COURSE COORDINATOR**

Dr. Rupinder Singh

### **COURSE Co-COORDINATOR**

Pf. Manjot Singh Bedi

### **GUEST FACULTY**

- Dr. O.P.Singh (BCET Gurdaspur)
- Dr. Sandeep Grover (YMCA Fbd.)
- Dr. Buta Singh Sidhu (MRRSPTU Bathinda)
- Dr. Harpreet Singh (IIT Ropar)
- Dr. Dilbag Singh (BCET Gurdaspur)
- Dr. Sanjeev Kumar (PEC Chandigarh)
- Dr. IPS Ahuja (Pbi. Univ. Patiala)
- Dr. G.S.Brar (NIT, U.K)
- Dr. Ajay Batish (TIET, Patiala)
- Dr. Dixit Garg (NIT, KKR)
- Dr. J.S.Dureja (Pbi. Univ. Patiala)

## **QIP Short Term Course**

**On**

# **TRIBOLOGICAL ANALYSIS OF FOUR DIMENSIONAL PRINTED ENGINEERING MATERIALS**

**Nov. 19 – 24, 2018**



**Department of Production Engineering**  
**Guru Nanak Dev Engineering College**  
**Ludhiana, Punjab – 141006**

**e-mail: [singhrupinder@gndec.ac.in](mailto:singhrupinder@gndec.ac.in)**  
**Phone: +91 98722-57575, +91 98035-66002**

## ABOUT THE INSTITUTE

Guru Nanak Dev Engineering College (An Autonomous College under UGC Act), established in 1956, has been straining persistently in the field of education by comprehending the need for up-liftment of rural youth in highly competitive, technologically-elevated society, in particular, and understanding the thirst for knowledge of students and quenching it in general. The College has been declared an Autonomous College by UGC, New Delhi on 17.8.2012. This college has the privilege of starting Ph.D degree under Quality Improvement Programme (QIP) by AICTE, New Delhi. Apart from offering various Accredited graduate level B.Tech courses vis-a-vis Civil Engineering, Computer Science & Engineering, Electrical Engineering, Electronics & Communication Engineering, Mechanical Engineering, Production Engineering, Information Technology, the institute imparts instruction in eleven Postgraduate M.Tech courses both on regular and part time basis. An excellent platform is provided to the researchers leading to Ph.D degree program.

## ABOUT THE DEPARTMENT

The first batch of M.Tech. (Production Engineering) started as part-time programme in 1980 followed by M.Tech. (Production Engineering) full-time programme in 1983 under Mechanical Engineering department. The department was renamed as Department of Production Engineering on January, 2009 and is functioning independently. At present it offers undergraduate and postgraduate courses in Production Engineering. The department has laboratory and workshop facilities with modern sophisticated equipment to carry out research in all areas related to Production Engineering. The faculty actively participates in sponsored research and consultancy work. The PG Prod. Engg. has been accredited by NBA (Tier-I) and all the courses offered by department are AICTE approved. The department is having very good pass percentage (in stipulated time) usually above 95% for UG/PG students. Since 2009, as independent department, Production Engineering is continuously maintaining strong International collaboration with outside world in form of joint research publications, editorial board memberships of reputed International journals.

## OBJECTIVE OF THE COURSE

- Tribological analysis of four dimensional printed thermoplastic composites
- Application of optimization techniques for four dimensional printed engineering materials
- Hand on experience for preparation of bio medical implants of thermoplastic composites by additive manufacturing
- Lab Testing of protective coatings, tribological analysis as per ASTM standards

## COURSE CONTENTS

1. Role of optimization for biomedical implants
2. Four dimensional printing of thermoplastic composites
3. Biomedical/Protective coatings and tribological analysis
4. Design of experiment (various tools for process optimization)
5. Case studies on dental/ortho implants.
6. Hand on experience for lab testing of implants.

## COURSE BENEFICIARIES

Faculty members pursuing Ph.D/ Research Scholars

## BROAD SUBJECT AREA

Manufacturing, Additive manufacturing

## RELATED DISCIPLINES

Production/Manufacturing/Mechanical/ Bio-medical/ Bio-technology/ CSE/IT

**NOTE:** For additional copies of the registration form, use a photocopy of this brochure or type in the format given. For further details:

<http://www.pe.gndec.ac.in>

[www.rupindersinghresearch.com](http://www.rupindersinghresearch.com)

QIP Short Term Course  
on

# **TRIBOLOGICAL ANALYSIS OF FOUR DIMENSIONAL PRINTED ENGINEERING MATERIALS**

**November 19 – 24, 2018**

## **Registration Form**

Name (in block letters) : \_\_\_\_\_

Designation : \_\_\_\_\_

Organization : \_\_\_\_\_

Mailing Address : \_\_\_\_\_

Age : \_\_\_\_\_ Sex ( M/F): \_\_\_\_\_

Mobile : \_\_\_\_\_

Email : \_\_\_\_\_

Educational Qualifications:

Prior Exposure to such program: Yes / No

*Accommodation in Campus: YES / NO*

Signature of Applicant:

Sponsorship & Signature of Head of the College / Institute (with date & seal).

*(Important: By signing above head of the College/Institute certifies that applicant is a faculty member of degree level engineering college recognized by AICTE)*

**Form should be complete otherwise the application will be rejected**