



Advanced Gear Engineering

November 21-22(Sat-Sun) 2015 KIC-TEQIP Short Term Course



Department of Mechanical Engineering, Indian Institute of Technology Guwahati

http://www.iitg.ernet.in/engfac/ssvelan/public_html/about.htm

About the course

This course will provide an overview of gear engineering. This course covers fundamental, advanced and current research scenario of materials, design, manufacturing, and performance aspects of gears including gear metrology

Gear Materials and Surface Treatment: Recent and potential gear materials including polymer and metal matrix composite materials. Surface treatment including conventional and non conventional methods.

Gear Design: Design fundamental including corrected gears. Design code including AGMA procedure, direct gear design, non standard gears. Role of finite element method for strength and transmission error prediction. Design of die including gate design for molding simulation of polymer based gears.

Gear Manufacturing: Precision gear manufacturing through non conventional manufacturing process including ECH, EDM, micro WEDM. Injection moulding, micro injection moulding, sintering for polymer and metal matrix composite gear manufacturing

Gear Performance: Testing procedure including power circulating, power absorption gear test rig for durability evaluation. Single tooth bending load carrying capability, rolling contact fatigue test rig. Kinematic performance analysis including transmission error evaluation test rig.

Condition monitoring of gears including fault diagnostic methods. Gear measuring center-individual and composite error

Financial Assistance:

For Participants from TEQIP Mapped Institutions:

- TA & DA from their respective Institutions

For Participants from Govt. Funded Institutions in NE:

- Reimbursement of to and fro railway fare via shortest route up to equivalent of 2nd AC Class train fare.

For all other participants:

- No TA & DA will be provided by IIT Guwahati

Boarding and Lodging:

Free boarding and lodging (on sharing basis @ 2 persons per room) in the Guest House will be provided.

Selection Criteria:

Number of seats is 30. Selection will be based on first cum first served basis from priority

1. TEQIP Mapped Institutions with IITG
2. Govt. Funded Tech. Institutes in NE
3. Other Institutions

Selected candidates will be informed by email.

How to Apply:

Application form can be download from the website:

<http://www.iitg.ernet.in/ssvelan/age>

The duly filled and endorsed application should reach the Course Coordinator before last date by email or by post. Postal address is given at the end.

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About TEQIP

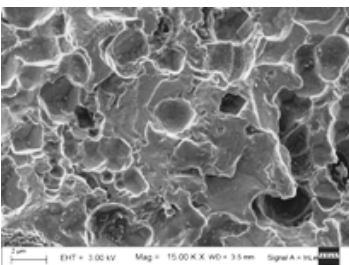
Under the TEQIP-II program sponsored by the MHRD IITs have been invited to participate by establishing a centre dealing with KNOWLEDGE INCUBATION (KIC) vide DO No. 16-25/2013-TS.VII dated 25th June 2013. These centers are intended to become a focal point for training Faculty, Staff and students from TEQIP-II institutions in Knowledge Engineering, Content Creation, Improving Teaching, Pedagogy & administrative skills in identified niche areas/ disciplines.

About KIC

KIC- Knowledge Incubation Cell at IITG functions as a multi disciplinary as well as interdisciplinary Innovation Incubation Centre with Knowledge Management as its focus. Its activities are in the area of improving quality of technical education, incubator of Innovative Ideas; implementer of contemporary pedagogy practices and development of Learning Content in

About IIT GUWAHATI

IIT Guwahati campus is spread over a sprawling 785 hectares plot of green land on the north bank of the river Brahmaputra around 25 km from the heart of the city. With hills and vast open spaces the campus provides an ideal setting for training. For details see: <http://www.iitg.ernet.in>



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