

**SHORT TERM COURSE
ON**

CATALYSIS

July 08-12, 2019

Under TEQIP-III

Registration Form

Name :
Designation :
Department :
Organization :
Address for :
Communication :
Mobile No :
Email ID :
Accommodation : Yes/No
required
Date:
Signature of the
Applicant

SPONSORSHIP CERTIFICATE

The applicant is hereby sponsored and will be permitted to attend the above conference, if selected.

**Signature and Seal of the Sponsoring Authority
(Principal/Director/Head)**

CHIEF PATRON

Chairperson BOG, NIT Jalandhar

PATRON

Professor L. K. Awasthi

Director, NIT Jalandhar

HEAD OF DEPARTMENT

Dr. Sangeeta Garg

Associate Professor

Chemical Engineering, NIT Jalandhar

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Dr R K Garg	Dr N K Srivastava
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COORDINATORS (MENTOR INSTITUTE)

Dr. Jatinder Kumar Ratan

Associate Professor

Dr. B.R. Ambedkar National Institute of Technology
Jalandhar

Dr. Deepak Sahu

Assistant Professor

Dr. B.R. Ambedkar National Institute of Technology
Jalandhar

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Dr. Rakhi Khandelwal

Assistant Professor

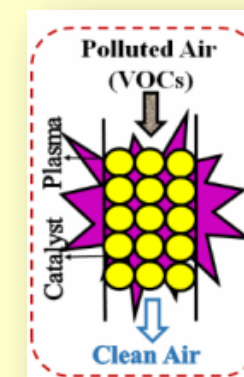
Government Women Engineering College, Ajmer
Rajasthan, India

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Organized by Mentor Institute



Department of Chemical Engineering
Dr B R Ambedkar
National Institute of Technology
Jalandhar, Punjab-144011 India
www.nitj.ac.in

In collaboration with Mentee Institute



Department of Chemistry
Government Women Engineering
College Ajmer, Rajasthan, India
<http://www.gweca.ac.in>

ABOUT NIT JALANDHAR

Dr. B. R. Ambedkar National Institute of Technology, Jalandhar (erstwhile REC Jalandhar), was established in the year 1987 and attained the status of National Institute of Technology on October 17, 2002. As National Institute of Technology, the Institute has a responsibility of providing high quality technical education in Engineering and Technology to produce competent technical manpower for the country. The Institute offers B. Tech. programmes in twelve disciplines of Engineering and Technology along with the research programmes leading to M. Sc, M. Tech. and Ph. D. degrees. The Institute has signed Memorandum of Understanding (MoU) with many prestigious institutes such as Ecole Centrale de Lille, France, University of Johannesburg, South Africa, along with other Universities abroad including UK, USA and Canada for the mutual academic exchange program and further strengthening of the academics and research.

ABOUT DEPARTMENT

Short Term Course on Catalysis will be held in the premises of the Department of Chemical Engineering, National Institute of Technology Jalandhar. The Department was established in 1990 and has been playing a vital role in the development of Chemical Engineering education and research by offering B Tech, M Tech and Ph D programmes. Its Alumni are occupying eminent positions in chemical industries, research and academic institutions in India and abroad. The Department also successfully conducted the Students Chemical Engineering Congress (SCHEMCON-08) in 2008, and Chemical Engineering Congress (CHEMCON -12) in 2012 and Chemical Engineering Congress (CHEMCON-18) in 2018.

ABOUT TEQIP

Technical Education Quality Improvement Programme (TEQIP) was envisaged as a long-term programme to be implemented in 2-3 phases for transformation of the Technical Education System with the World Bank assistance. As per TEQIP phase III design, the project has following main objectives: Providing teaching and research assistantships to increase enrollment in existing and new PG programmes in engineering disciplines, subject knowledge and research competence, organizing subject area training programmes, workshops, seminars, conferences, modernization & strengthening of laboratories,

COURSE OBJECTIVES

The aim of this course is to deliver a knowledge to the students about catalysts, different catalyst, their structure, characterization and preparation, catalytic reactions. Mechanism and kinetics of heterogeneous catalytic reactions and reactor design, along with deactivation of the catalysts, will be discussed in depth in this course so as to provide a holistic view of applied heterogeneous catalysis to the participants.

COURSE CONTENTS

- Introduction to catalysis, adsorption in catalysis, adsorption types and kinetics
- Catalyst types and preparation, solgel method, supported catalysts, drying, calcinations and formulation
- Characterization: structure-property relationship and analysis, surface area analysis, pore analysis, XRD analysis, thermal analysis, FTIR analysis, catalyst tests
- Catalytic reactions: Reaction mechanism, internal and external transport, catalyst deactivation
- Modern catalysts: Zeolite catalysts, nanocatalysts, photocatalysts, carbon nanotubes, non-metal and metal oxide catalysts

REGISTRATION

There is no registration fee for participants. The registration process will be completed only when the registration form is received, however, the candidate may send an advance copy directly through mail, post, by hand. Please send the fully filled prescribed Performa for registration to the coordinators latest by **30-06-2019**.

COURSE OUTCOMES

- Ability to develop an understanding of the catalytic processes
- Understanding of methods of preparation and characterization of the catalysts
- Ability to improve the physical and chemical properties of the catalysts
- Understanding of techniques of synthesis of novel catalysts

RESOURCE PERSONS

The Faculty of the course will be experienced personnel from teaching, education, research and consultancy organizations such as IITs, NITs, CSIR etc.

ACCOMMODATION

A limited number of rooms with shared accommodation are available in hostels/guest house of NIT Jalandhar. Accommodation will be arranged on request of first come first serve basis.

LOCATION

The institute is located on G.T. Road, Amritsar bypass, 12 km from Jalandhar Bus Stand, 11 Km from Jalandhar City Railway Station and 16 Km from Jalandhar Cantonment Railway station. It is around 70 Km away from Raja Sansi International Airport, Amritsar, 150 Km from Chandigarh Airport and 390 Km from Indira Gandhi International Airport, New Delhi. It is connected to New Delhi by rail through Shatabdi Express and other superfast trains as well as through AC buses round the clock. The city is surrounded by famous rivers Sutlej and Beas and is internationally famous for agricultural products, textiles, leather goods, wood products, and sports goods. The nearby site seeing includes Golden Temple, Jallianwala Bagh, Wagah Border, Science City etc.

For Participation

**REGISTER WITH
COURSE COORDINATOR**

Dr. Jatinder Kumar Ratan

Associate Professor

Department of Chemical Engineering
&

Associate Dean (R & C)

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Jalandhar-144011, Punjab

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