

## Registration form

Name: \_\_\_\_\_

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

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

Address for correspondence: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

E-mail: \_\_\_\_\_

Phone: \_\_\_\_\_

### Particulars of Registration Fee:

DD No.: \_\_\_\_\_ Date: \_\_\_\_\_

Amount: \_\_\_\_\_ Bank: \_\_\_\_\_

Accommodation Required: Yes/No

Date: \_\_\_\_\_ Signature: \_\_\_\_\_

Place: \_\_\_\_\_

The complete registration form accompanied by DD of requisite amount may be mailed well in advance to the coordinator. Payment in form of DD should be made in favor of "Director, NIT Rourkela", payable at Rourkela.

## Course venue

The course will be conducted in Department of Metallurgical and Materials Engineering, NIT Rourkela. Established in 1964, the department has been emerged as powerhouse for academics, scientific research and cutting edge technologies. With time, the department grew noticeably and established new areas of research and teaching in materials engineering, while retaining its strength in traditional areas in Metallurgical engineering.

## Course objectives and deliverables

This program facilitates to hone the leadership instinct and capabilities among industrious managers. The prime objectives of the programme will be:

- To guide managers for successful careers in the esteemed organization by understanding the underlying theory and rationality behind process run in an integrated steel and non-ferrous plant.
- To equip managers with a wider understanding of the quality issues associated with steel and non-ferrous product and acquaint them more integrated view of the process with respect to identifying the origin of those issues.
- To understand the cross-discipline/ department knowledge and information transfer for combating industry process oriented problems, introducing technological innovation and making strategic vision to drive change, innovation, and future growth.

## Panel discussion:

### Theme - I:

Ferrous extractive industries and its environment

#### Panellists:

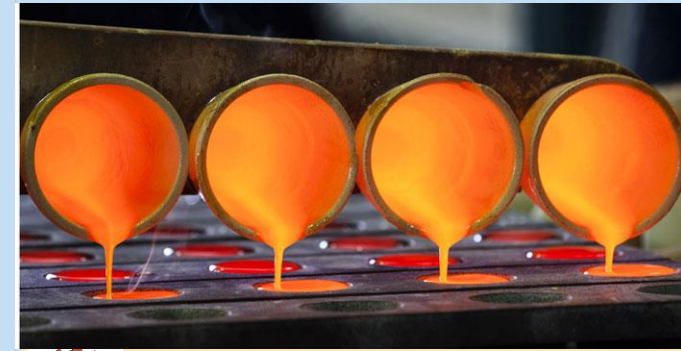
Prof. M. Kumar, Prof. S. Sarkar, Er. Dilip Ku. Das, Prof. A. Behera, Er. P.C.Das

### Theme - II:

Non-ferrous extractive Metallurgy and its environment

#### Panellists:

Prof. Arpan Nayak, Prof. K. Mahanta , Er. D. K. Sahoo, Er. P. Mallik, Er. Ranjan jena



## SHORT TERM COURSE ON

## PROCESS METALLURGY AND ITS ENVIRONMENTAL IMPACT

February 21 - 25, 2019



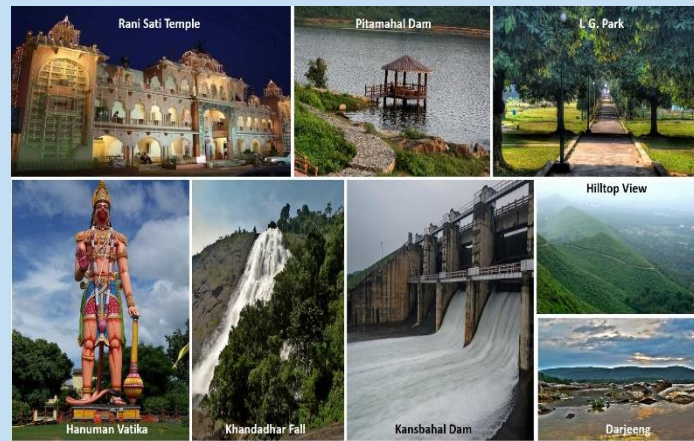
Organized by

Dept. of Metallurgical and Materials Engineering

National Institute of Technology Rourkela

Rourkela-769008

Odisha, India





## Significance of the course

Process metallurgy provides academics with the fundamentals of the manufacturing of metallic materials, from raw materials into finished parts or products. The aim of this course is to develop an understanding of principles of metallurgical processes, reactor design, metallurgical reactions, and development of metallurgical processes. Many of the unique features of metallurgical systems have been described in sufficient detail and numerous illustrative examples have been included so that it should also be useful for future metallurgical engineers working in the development period of new processes and/or in the continuation of the current processes. This five days short term course is intended to serve as a comprehensive course in process engineering metallurgy for the metallurgical engineering & materials science sectors. Engineering aspects of mineral processing, including unit operations and flow sheets. Science and technology of metal extraction with applications to specific ferrous and non-ferrous metals. The course includes methods for reactors used in iron and steelmaking, non-ferrous metallurgy, handling and use of metallurgical by-products, project task, and scaling-up of some metallurgical reactors and processes. The program structure aims to strengthen the understanding of the students in the core areas of metallurgical and materials engineering in order to meet the needs of the Indian industry as well as R&D

## Resource Persons

Prof. S. Sarkar (NIT-Rkl)  
 Prof. Arpan Nayak (VIT Vellore)  
 Er. P. Mallik (HAL-Sunabeda)  
 Prof. S. Pal (NIT Rkl)  
 Er. D. K. Sahoo (SPCB)  
 P c dash (SAIL-RSP)  
 Dr. Ajit Bhehera(NIT-Rkl)  
 Yogesh Dalmia (Suraj Product)  
 Mr. Dilip dash (SAIL-RSP)  
 Mr. Ranjan jena (SAIL-RSP)  
 Prof. M. Kumar(NIT-Rkl)  
 Dr. K. Mahanta (Aditya Birla)

## Course outline

Days	Focused Area
Day -I (21/02/2019)	Latest advancement in coal based DRI process
	Environment management in coal based DRI plant with solid waste utilization
	Nanomaterial for energy and environment
Day -II (22/02/2019)	Modern blast furnace operation
	Environmental management in integrated steel plant (special focus on solid waste utilization)
	Lab: DRI product and by-products : observation and analysis in lab scale
Day -III (23/02/2019)	Secondary Steel making process
	Agglomeration processes in ferrous and nonferrous industries
	Lab: Integrated steel plant products, by-products and their lab scale analysis
Module IV (24/02/2019)	High amperage POT operation (Aluminium smelting process)
	Environment management in Aluminium smelting process (challenge and opportunities)
	Hazardous waste management in Aluminium smelting process
Module V 25/02/2019	Eco-friendly mining
	Maintenance Strategy and Practices: Introduction to Basic Maintenance Process, Discussion on Standard Maintenance Practices, Short term and Long term Shutdown Scheduling, Strategy of heavy equipment Maintenance

## Who should attend?

Majorly for faculties, Industry persons and professionals (Engineers, Technical Managers etc.) from reputed institute and industries.

*The Successful participants who will attend the whole courses will be given participation certificate.*

## Important Dates

Last date for receipt of application is 15<sup>th</sup> of February 2019 and the notification of acceptance will be by 10<sup>th</sup> of November.

## Registration Fees

Faculties from institutes : INR 3000

Industry delegates : INR 5000

The course fee includes course material, breakfast, lunch, and refreshment during the program days. Participants (Faculty members and Ph.D. students) from NITRKL are exempted from paying registration fees.

## Accommodation

Accommodation will be provided in institute guest house on first come first serve basis. Double occupancy rooms for scholars and young faculties.

South block guest house Room : INR 1200 per day  
 North block guest house Room : INR 600 per day

## Course Coordinators

### Coordinator

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 NIT Rourkela  
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### Co-Coordinator

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