



Government of India
Ministry of MSME

ESDP Six-Week Certificate
Course on
**Materials Processing
and Characterization
of Materials**

(26th Dec-02nd Feb, 2023-2024)

Organized Jointly by

Br MSME DFO Srinagar

Ministry of MSME

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**Department of Metallurgical and
Materials Engineering**

**National Institute of Technology
Srinagar Hazratbal
J&K, India (190006)**



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ABOUT THE INSTITUTE

National Institute of Technology, Srinagar is one of the premier Educational Institutes in the Northern Regions of the country. It was established in 1960 and has been one of the eighteen Regional Engineering Colleges sponsored by the Govt. of India during the 2nd Plan. The Institute acquired the status of National Institute of Technology with deemed to be University status during August, 2003 and attained full autonomy in its Academics.

ABOUT THE DEPARTMENT

The department of “Metallurgical and Materials Engineering” was established in the year 1963. It conducts a four years under-graduate programme leading to the award of B.Tech. in Metallurgical and Materials Engineering". The department has adequate laboratory facilities to conduct experiments for the undergraduate students in various courses of the engineering curriculum. The department has qualified faculty and the expertise available including disciplines viz. Foundry Technology., Materials Technology, Corrosion Engineering, Welding Technology, Physical Met., Ferrous and Non-ferrous Metallurgy, Non-destructive Testing and Evaluation etc. Apart from teaching, the department is engaged in a wide range of activities covering research and development, testing and consultancy, curricular and faculty development.

COURSE OUTCOMES

- To identify the materials processing techniques and make use for the development of components
- To analyse the microstructure and assess the structure property relationship
- To identify and choose an appropriate method for the prevention of corrosion of materials

OBJECTIVE OF THE COURSE

- To provide the fundamental knowledge of the theoretical and practical aspects of some important domains of Metallurgical and Materials Engineering
- To introduce the participants about the field of metal casting, thermo-mechanical processing, microscopy and property evaluation techniques.
- To demonstrate the use of characterization tools in the field of manufacturing processes, structure property evaluation, corrosion behavior and non-destructive testing.

COURSE OUTLINE

Four sessions a Day

Week 1

Fundamentals of Metal Casting Technology

Week 2

Fundamentals of Physical Metallurgy, Heat Treatment of materials, Metallographic and Micro structural evaluation

Week 3

Invited Lecture series from MSME on Startups and inputs specified for entrepreneurship.

Week 4

Familiarity with mechanical testing of materials and Thermo-mechanical working processes

Week 5

Familiarity and application of non-destructive testing (NDT) of materials

Week 6

Fundamentals of corrosion engineering and preventive methods against corrosion

AUDIENCE DOMAIN

This Course is open for industrial persons, students and graduates from Polytechnic and Engineering colleges

REGISTRATION

Link for registration

<https://forms.gle/zL2yCQuqJyKvqrvu8>

Note:

- **No Registration fees for the course**
- *Registration is limited to the first 30 relevant applicants.*
- *No lunch & accommodation will be provided. Only Refreshment snacks will be served during the session break.*

IMPORATNT DATES

Registration Starts: 25/11/2023

Registration Ends: 17/12/2023

Course Starts: 26/12/2023

Course Ends: 02/02/2024

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