Mindluster Platform

About the course Nanotechnology in chemical engineering

Course Presenter : IIT Roorkee July 2018

Unlock the transformative potential of nanotechnology within the field of chemical engineering through this comprehensive online course. Designed for engineers and professionals in the Middle East and beyond, this training course offers a deep dive into the latest advancements in nanotechnology, equipping you with the skills needed to innovate and excel in your career. Whether you're seeking to enhance your professional skills or aiming for career growth, this certified course provides the knowledge foundation to stay ahead in the rapidly evolving engineering landscape. Throughout this course, you will learn how nanotechnology is revolutionizing chemical processes, materials development, and environmental solutions. The program covers fundamental concepts, practical applications, and cutting-edge research, enabling you to integrate nanotech innovations into real-world engineering projects. This online course is structured to fit your schedule, offering flexible learning without compromising quality. What you will learn: - Fundamentals of nanotechnology and its role in chemical engineering - Techniques for designing and manipulating nanomaterials - Applications of nanotechnology in chemical processes and environmental engineering - Safety and ethical considerations in nanotech research - Innovation strategies to incorporate nanotechnology into existing engineering systems - Latest trends and future prospects of nanotech in the Middle East and globally Who this course is for: - Chemical engineers seeking to expand their expertise - R&D professionals involved in materials and process development - Engineering students aiming to specialize in nanotechnology - Industry leaders looking to incorporate innovative solutions into their operations Why choose this course on our platform: - Certified course recognized for professional development - Industry-relevant content curated by leading experts - Flexible online learning tailored for busy professionals - Access to comprehensive training materials and expert support - Boost your profile with a globally recognized certification Career opportunities: Completing this course opens doors to advanced roles in research, development, and innovation within the chemical engineering sector. You can pursue careers in nanomaterials manufacturing, environmental engineering, pharmaceuticals, or technology startups focused on nanotech solutions. This certification enhances your professional credibility and positions you for leadership roles in your organization. Upon successful completion, you will receive a professional certificate that validates your expertise in nanotechnology for chemical engineering, supporting your ongoing career growth and development in the Middle East and beyond. IIT Roorkee July 2018

Engineering Category's Courses

Course Lesson(41)

Lesson 1 : **Nanotechnology in Chemical Engineering Promo Video By Prof Taraknath Das**

Lesson 2 : **Lecture 01 Introduction Overview**

Lesson 3 : **Lecture 02 Introduction Types of materials**

Lesson 4 : **Lecture 03 Introduction Properties**

Lesson 5 : **Lecture 04 Introduction Properties HT**

Lesson 6 : **Lecture 05 Introduction Properties MT Defects**

Lesson 7 : **Lecture 06 Introduction Properties Mech Ele Opt Mag**

Lesson 8 : **Lecture 07 Introduction Synthesis of nanomaterials**

Lesson 9 : **Lecture 08 Introduction Characterizations and Applications**

Lesson 10 : **Lecture 09 Structure and Bonding**

Lesson 11 : **Lecture 10 Synthesis of nanomaterials Physical methods**

Lesson 12 : **Lecture 11 Synthesis of nanomaterials Physical method II**

Lesson 13 : **Lecture 12 Synthesis of nanomaterials Physical method III**

Lesson 14 : **Lecture 13 Synthesis of nanomaterials Physical method IV**

Lesson 15 : **Lecture 14 Synthesis of nanomaterials Chemical method â€“ I**

Lesson 16 : **Lecture 15 Synthesis of nanomaterials Chemical method II**

Lesson 17 : **Lecture 16 Synthesis of nanomaterials Chemical method III**

Lesson 18 :
Lecture 17 Synthesis of Nanomaterials Some special NMs Synthesis of carbon NMs Fullerene

Lesson 19 :
Lecture 18 Synthesis of Nanomaterials Some special NMs synthesis of carbon NMs CNTs

Lesson 20 : **Lecture 19 Synthesis of Nanomaterials Synthesis of Porous Silicon Si**

Lesson 21 : **Lecture 20 Synthesis of Nanomaterials Synthesis of MOFs**

Lesson 22 : **Lecture 21 Synthesis of Nanomaterials Synthesis of Aerogels**

Lesson 23 : **Lecture 22 Synthesis of Nanomaterials Synthesis of Zeolite**

Lesson 24 : **Lecture 23 Characterization of nanomaterials SEM**

Lesson 25 : **Lecture 24 Characterization of nanomaterials TEM**

Lesson 26 : **Lecture 25 Characterization of nanomaterials SPM STM AFM SNOM**

Lesson 27 : **Lecture 26 Characterizations of Nanomaterials BET 1**

Lesson 28 : **Lecture 27 Characterizations of Nanomaterials BET 2**

Lesson 29 : **Lecture 28 Characterizations of Nanomaterials TGA Zeta potential**

Lesson 30 : **Lecture 29 Materials Characterization Techniques XRD**

Lesson 31 : **Lecture 30 Materials Characterization Techniques XPS**

Lesson 32 : **Lecture 31 Materials Characterization Techniques FTIR**

Lesson 33 : **Lecture 32 Materials Characterization Techniques Raman UV vis NIR DLS**

Lesson 34 : **Lecture 33 Application of Nanotechnology in Wastewater Treatment**

Lesson 35 : **Lecture 34 Nanotechnology in Mass Transfer 1**

Lesson 36 : **Lecture 35 Applications of Nanotechnology in Mass Transfer 2**

Lesson 37 : **Lecture 36 Applications of Nanotechnology in Heat Transfer**

Lesson 38 : **Lecture 37 Applications of NMs in Catalysis**

Lesson 39 : **Lecture 38 Applications of NPs in Enhanced Oil Recovery EOR**

Lesson 40 : **Lecture 39 Applications of Nanotechnology in Hydrogen Storage**

Lesson 41 : **Lecture 40 Applications of Nanotechnology in Biofuels**

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