

Nanotechnology

Module 1:	• Introduction to Nanotechnology • Definition & Scope • History & Milestones • Nanoscale Fundamentals • Importance in Modern Engineering	13th October (06:00-07:00)
Module 2:	• Types of Nanomaterials • Carbon Nanotubes (CNT) • Graphene • Metal Nanoparticles • Quantum Dots • Nanocomposites	17th October (06:00-07:00) 20th October (06:00-07:00)
Module 3:	• Synthesis Techniques • Top-Down Approach • Bottom-Up Approach • Chemical Vapor Deposition (CVD) • Sol-Gel Method • Ball Milling	23th October (06:00-07:00) 28th October (06:00-07:00)
Module 4:	• Characterization Technique • SEM • TEM • AFM • XRD • UV-Visible Spectroscopy	31th October (06:00-07:00)
Module 5:	Nanotechnology in Electronics • Nano-transistors • Nano Sensors • Flexible Electronics • Semiconductor Nanotechnology	Dates and timings for this topics will notified you soon after getting the time slots from our Trainer
Module 6:	Nanotechnology in Medicine • Nano Drug Delivery Systems • Cancer Therapy using Nanoparticles • Tissue Engineering • Biosensors	Dates and timings for this topics will notified you soon after getting the time slots from our Trainer

Module 7:	Nanotechnology in Energy Sector • Nano Solar Cells • Lithium-ion Batteries • Hydrogen Storage • Supercapacitors	Dates and timings for this topics will notified you soon after getting the time slots from our Trainer
Module 8:	Nanotechnology in Environmental Engineering • Water Purification using Nanofilters • Air Pollution Control • Waste Treatment • Environmental Remediation	Dates and timings for this topics will notified you soon after getting the time slots from our Trainer
Module 9:	Nano Fabrication & Clean Room Concepts • Lithography Techniques • Thin Film Deposition • Etching Process • Clean Room Standards	Dates and timings for this topics will notified you soon after getting the time slots from our Trainer
Module 10:	Nano Robotics & Smart Materials • Nano Robots • Self-Healing Materials • Shape Memory Alloys • Intelligent Materials	Dates and timings for this topics will notified you soon after getting the time slots from our Trainer
Module 11:	Simulation & Computational Nanotechnology • Introduction to Nano Simulation Tools • Molecular Modeling Basics • Density Functional Theory (Basics) • MATLAB/Python in Nanotech Research	Dates and timings for this topics will notified you soon after getting the time slots from our Trainer
Module 12:	Capstone Project & Industry Exposure • Project Development • Case Study Discussion • Research Paper Review • Presentation & Viva • Career Opportunities in Nanotechnology	Dates and timings for this topics will notified you soon after getting the time slots from our Trainer