

Five Day
Faculty Development Programme

on

"NANOTECHNOLOGY"

9th to 13th January, 2023

Certificate

Certificates will be given to the registered
and effective participants

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Five Day
Faculty Development Programme
(FDP)

On

"NANOTECHNOLOGY"

9th to 13th January, 2023

Organized by

Department of Mechanical Engineering
Jyothi Engineering College, Thrissur



CREATING TECHNOLOGY
LEADERS OF TOMORROW
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Sponsored by

APJ Abdul Kalam Technological University
Thiruvananthapuram, Kerala

Jyothi Engineering College
NAAC Accredited College with NBA Accredited Programmes

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Course Significance

Nanotechnology is a common word these days, but many of us do not realize the amazing impact it has on our daily lives. According to the United States National Nanotechnology Initiative, nanotechnology is “science, engineering, and technology conducted at the nanoscale, which is about 1 to 100 nanometers.” One nanometer is a billionth of a meter, or 10^{-9} of a meter. For comparison, a sheet of newspaper is about 100,000 nanometers thick. Scientists have discovered that atoms and molecules behave differently at the nanoscale. It is also a rapidly expanding field. Scientists and engineers have great success in making materials at the nanoscale to take advantage of enhanced properties such as higher strength, lighter weight, increased electrical conductivity, and chemical reactivity compared to their larger-scale equivalents

Course Objectives

1. To make sense of nanotechnology.
2. To understand the smallness of nano scale.
3. To appreciate the impossibility of creating nano scale materials with macro scale tools.
4. Explore the applications of nanotechnology and how it is changing materials

Course Contents

1. Nano materials
2. Polymer Nano composites
3. Molecular Nano composites
4. Liquid Crystals
5. Environmental Biology
6. Nano technology from lab to industry
7. Green and Economical methods in Graphene synthesis
8. Nano fabrication by Electrospinning
9. Nanotechnology in concrete materials
10. Engineered nano systems for next generation sensing energy harvesting and medicine
11. Fundamentals of carbon nanostructure

About JEC

Jyothi Engineering College (JEC) set up in 2002, under the aegis of Trichur Educational Trust, founded by the Catholic Archdiocese of Trichur, is a leading Engineering College in Kerala. Jyothi Engineering College is NAAC accredited. The NAAC instrument is developed to objectively assess and grade institutions of higher education. Five of the undergraduate programs offered by Jyothi Engineering College have NBA accreditation. In order to help students become “job creators” rather than “job seekers”, Jyothi Engineering College has also set up a Integrated Industrial Incubation Centre (IIIC), in association with TATA Technologies and Technology Business Incubator, JEC TBI, to create technology based new enterprises, foster an entrepreneurial spirit among students and commercialize R&D output. Additionally, Jyothi Engineering College offers a vibrant, beautiful, and green environmentally friendly campus, and excellent infrastructure for students, to aid the teaching and learning process.

About Department

The Department of Mechanical Engineering started functioning in 2004, two years after the inception of the College. Currently, the department offers a four year UG program in Mechanical Engineering and is affiliated to APJ Abdul Kalam Technological University. UG program in Mechanical Engineering attracts bright and aspiring students every year and is designed to provide solid foundations for careers in industry, research, and academia. The department has highly qualified, experienced and dynamic faculty members with specialization in Thermal Engineering, Machine Design, Materials Engineering, Advanced Manufacturing, Industrial Engineering and CAD/CAM. The department is equipped with most modern infrastructure and state-of-art laboratories to undertake high-end teaching, research and developmental activities. The department has well equipped infrastructure, department library computing facilities with the latest software like Pro-E, Catia Solid works etc. The department is vibrant with several activities, both academic and cultural round the year.

