

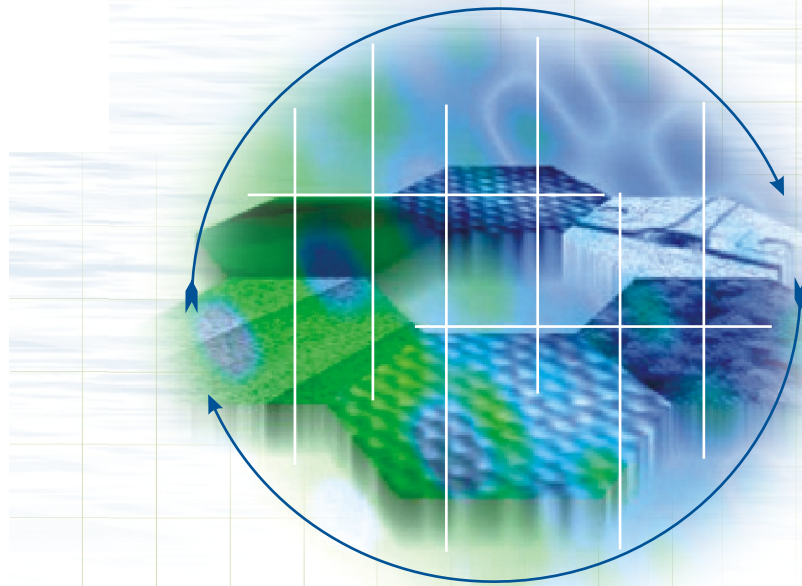
Program Brochure



POST GRADUATE

INTEGRATED PROGRAM IN NANOTECHNOLOGY

With E-learning program delivery



A Nanotechnology Program

from basics to advanced

with ease and flexibility

of Distance Learning

on sophisticated Learning

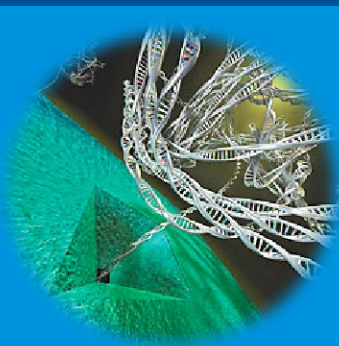
Management System



A Nanotechnology platform

Nano Science & Technology Consortium

www.nstc.in



Glimpses



C. N. R. Rao inaugurating Bangalore Nano 2007



Enthusiastic students enquiring about NSTC



A scholar reading about NSTC activities



Professionals at NSTC stall

Post Graduate Integrated Program in Nanotechnology

NSTC: An Overview

NSTC is a non-governmental, privately run body, which came into existence in the year 2005. It aims to provide, or facilitate in providing of the services that lead to awareness creation, research and development, consultancy, partnering/collaborations, technology transfer and commercialization of advancements in Nano-research.

Nano Science & Technology Consortium (NSTC) endeavors to function as a platform that is conducive for the growth, promotion and partnering in the field of Nanoscience and Nanotechnology.

NSTC Activities

Creating awareness in Nanotechnology through programs such as the Nano Sensitization Program, Industry Program in Nanotechnology, Integrated Program in Nanotechnology, PG Program in Bionanotechnology & Medical Applications, Nanotechnology Teachers Training Program and the PG program in Scientific & Technical writing.

Nanotechnology Content Development Services

Nanotechnology Event and Product Promotion Services

Conducting Nanotechnology Workshops

Nanotechnology Consultancy, Outsourcing, Technology Transfer

Partnering and Collaboration

Publication of online (bimonthly) journal, 'NanoTrends: A Journal of Nanotechnology and Its Applications'

Publication of online newsletter, 'NanoSpectacle: A Monthly 10⁻⁹ Newsletter'

Publication of other nanotechnology documents

Nanotechnology Career & Job Opportunities

Nanotechnology is grabbing the attention of employers as well as jobseekers. Current applications of nanoscale science and technology, and thus career opportunities, exist in areas such as: electronics /semiconductor industry, textiles, polymers, packaging, auto and aerospace

industries, sports equipment, pharmaceuticals including drug delivery, cosmetics, biotechnology, medical fields, optoelectronics, environmental monitoring and control, food science including quality control and packaging, forensics, university research, national security, military, and many more.

According to the National Science Foundation (USA), Nano-related business could be a \$1 trillion market by 2015, making it one of the fastest growing industries in the history. As per a study by Nanotechnology Victoria, the number of Nanotechnology skilled personnel needed by 2015 in order to support Nanotechnology research based industry is more than 1 million.

Integrated Program in Nanotechnology

Nanotechnology is a newborn discipline that responds to the demand of a multi-disciplinary scientific know-how which translates into superior products and technologies with the manipulation at 10⁻⁹ scale.

Integrated Program in Nanotechnology explains the integration of physics, biology and chemistry at the nanometer scale, and tops this with applications of technology and engineering to ensure know-how of practical implementations of nanotechnology at various levels.

Learning Outcomes of the Program

The program aims to:

Present a holistic view of nanotechnology & the nanoworld.

Explain the unique properties of nano/micro and thin films and how they play a key role in a wide range of technology applications.

Explain basic scientific principles related to the behavior of matter at the atomic level in chemical, biological, and mechanical systems.

Follow procedures of the fabrication process as it applies to biological, chemical and electronics manufacturing technologies.

Follow testing and characterization

Post Graduate Integrated Program in Nanotechnology

procedures for materials, thin films, components and packaged devices.

Perform technician-level functions in a micro-nano and thin-film fabrication environment.

Follow proper experimental design, tracking and documentation procedures.

Work effectively as a member of a technical team.

Course Aim :

The innovative Integrated Program in Nanotechnology aims to give participants a thorough grounding in the skills necessary for a technology-based career in the new high-tech industries.

The course covers technologies used to design, realise and analyse micro and nano-scale devices, materials and systems, coupled with general management and technology management. This, supported by project work, ensures graduates emerge trained in a wide range of technical and management skills, and have a sharp appreciation of the relevance of the subject to industrial needs.

Course Structure

The Integrated Program in Nanotechnology bridges the basic fundamental science with high-end nanotech applications. The nine month Integrated Program in Nanotechnology will prepare the scientists and engineers for the booming economy emerging from application of the Nanosciences.

The lay out of the program originating from these concepts is outlined below.

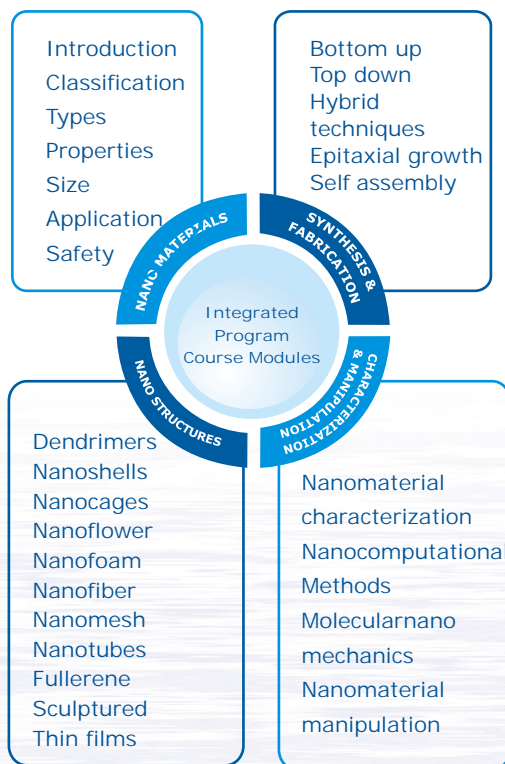
A) Basic Module: We have divided the multidisciplinary field of Nanotechnology into five major themes:

- (i) Nanotechnology
- (ii) Nanoscience
- (iii) Nanophysics
- (iv) Nanochemistry
- (v) Bionanotechnology

B) Bridging Module: It is a unique top up feature that supplements the curriculum with additional ingredients like - multidimensional web based activities, special complimentary books, exciting

practical manual, ample industry and academic interaction opportunities. This module acts as a buffer between the basic and advanced modules, thus acting as a catalyst to the development of quality nanotechnology skills and knowledge base.

C) Advanced Module: This structure combines flexibility with integration of the separate components right from the fundamental level to the high-end applications thereby providing a holistic view of the whole gamut of Nanotechnology.



Program Duration

Duration to complete the program is nine months. However the candidates have maximum of twelve months to complete the program. (it is inclusive of a grace period of three months against a re-registration fee of Rs. 2000 / US\$ 75).

Eligibility

Any enthusiastic student / professional pursuing diploma/ graduation /post-graduation, in any scientific discipline/ industry can join. Experienced professionals, academicians and researchers too are advised to join this program for enhancing their knowledge of Nanotechnology.

MOU's



NDure Technologies Pty. Ltd. , Australia
MOU Signed by Dr. Ravi krishnamurthy
in Sep 2009



Cinvestav Premises, Mexico
Dr. Velumani Subramaniam from
Cinvestav visited NSTC.
MoU signed on 9th April 2008.



National NanoFab Center, Korea

MoU signed by
Dr. Hee Chul Lee of National NanoFab Center.
in August 2008.

Change in Information Policy

NSTC reserves the right to change the commencement/ conclusion dates of the program.

Legal

In case of any dispute, the jurisdiction is only Noida district and the dispute has to be resolved only through arbitration and the sole arbitrator is Director NSTC.

A select list of Institutional associations/
affiliations of program participants

Accenture
AIIMS
Alagappa University
Aligarh Muslim University
Amrita Institute of Medical Sciences
Anna University
Apollo Hospital
Ashok Leyland
BARC
Bharat Earth Movers Ltd.
Bharat Electronics
BHEL
Biocon Ltd.
BSNL
Central Forensic Science Laboratory
Cognizant Technology
Covansys
Deloitte Consulting
Department of Atomic Energy
Dr. Reddy's Lab
DRDO
Excel Hitech India Enterprises Pvt. Ltd.
Grasim Industries Ltd.
HCL Technologies Ltd.
Hewlett Packard
Hindustan Levers
Hindustan Petroleum
Honeywell Technology Solutions
IIT Delhi
IIT Guwahati
Indian Agricultural Research Institute
Indian Air Force
Indian Army
Indian Institute of Science
Indian Navy
Indian Oil Corporation Ltd.
Infosys Technologies Ltd.
ISRO
Johnson & Johnson
Larsen & Toubro
Mahindra & Mahindra Ltd.
Manipal Institute of Technology
MRF Ltd
NALCO Ltd.
National Aerospace Laboratories
National Metallurgical Laboratory
National Physical Laboratory
ONGC Ltd.
Pfizer Ltd.
Polaris Software Labs Ltd.
Reliance Energy Ltd.
Robert Bosch India
SAIL
SAP Labs
Siemens
SRL Ranbaxy Ltd.
Sterlite
Satyam Computers
Syntel Inc. India Ltd.
Tata Consultancy Services Ltd.
TATA Research Development and Design Centre
Tata Steel
TB Research Centre, ICME
Tech Mahindra Ltd.
Unichem Labs Ltd.
Vellore Institute of Technology
Vikram Sarabhai Space Center
Wipro Technologies

Post Graduate Integrated Program in Nanotechnology

Fee structure and payment norms

The program fee should be sent along with completed application form. The fee should be paid through a Demand Draft/ Managers Cheque, issued in favor of "Nano Science and Technology Consortium", payable at "Delhi/ New Delhi".

Fee Details	Indian Students	Overseas Students
Program Fee*	Rs. 20,000=00	US\$ 1200 =00

Scholarships

Upto 50% scholarships are awarded to participants based on the following criteria:

- 1) SC/ST
- 2) Physically Challenged
- 3) Scholarships for Women
- 4) Based on last academic performance in graduation/ post- graduation.
- 5) Group scholarship.

Please visit: www.nstc.in/programs for scholarship details.

Program implementation methodology

Join the program by submitting the application form along with the program fee.

Receive Program study kit (books & CD's), and assignment(s) at your postal address.

Use the User-Id password for accessing e-learning portal.

Comfortably study and complete the program, right from the commencement to the conclusion without any need for physical presence, using the unique self-study Integrated Program kit .

Participate on web portal activities (<http://nstc.celnet.in>), receive Internet based support.

Internet based support.



State of the art Online Teaching Methodology

Participants Benefit by:

- ▶ Online course material and learning
- ▶ Online student support
- ▶ Online guidance and tutoring

Enrollment Procedure

Aspirants who wish to apply for the PG Integrated Program in Nanotechnology can download the application form from our website: www.nstc.in/programs

- ▶ Participants must send the completed application form (enclosing a Demand Draft / Managers Cheque issued in favor of "Nano Science and Technology Consortium", payable at Delhi/ New Delhi), along with a copy of self attested certificate/ marksheet of the highest Degree/ Diploma and a copy of passport size photograph.
- ▶ Participants must provide an e-mail address for accessing the online course modules.
- ▶ One can apply any time of the year the registration will be provided for the current or the ongoing batch.
- ▶ Participant can register for more than one program at the same time.

Examination and Certification

Evaluation for the course shall be conducted periodically both online as well as through written project work. The time duration required to complete the program is nine months. Students are instructed to complete and ensure submission of the said project work and online examination within the stipulated time period of 9 months. Failing to meet this time-line requires a re-registration in the same program, by remitting a re- registration fee of Rs. 2000=00/ US\$75=00. This facilitates an extension of three months (maximum) period for the submission of the final project work/ passing online examination.

Every deserving candidate passing the course shall be provided the coveted certification by Nano Science and Technology Consortium in hard copy by registered post.

Nano Science and Technology Consortium
C-56A/28, Sector-62, Noida - 201 301 (U.P.), INDIA
Tel.: 0120 - 4330376, 09818206463

E-mail :info@nstc.in
Website : www.nstc.in/programs