



A Nanotechnology platform

Summer/Winter Training & Project Work



Nano Science & Technology Consortium

(Consultancy . Research . Outsourcing . Technology)

http://nstc.in/education-training/training_projects.html

Prospectus

NSTC: An Overview

NSTC is a non-governmental body, which came into existence in the year 2005. It aims to provide the services that lead to awareness creation, research and development, consultancy, collaborations, technology transfer and commercialization of budding Nano-based technologies. NSTC With over 250 corporate and industrial members has positioned itself as a unique and dependable resource for providing quality Nanotechnology education through trainings. NSTC also runs India's only primary journal in the field of Nanotechnology, entitled "NanoTrends".

About New Technologies

If we talk about the most promising technology till now which has the potential of transforming the world then nanotechnology is the name which blinks in the mind. The **implications of nanotechnology** extend from the medical, ethical, legal and environmental applications, to fields such as engineering, biology, chemistry, computing, material sciences, military applications, and communications.

For the budding scientist & engineers it is very important to know and understand the latest that when they join the industry they are capable of giving back to the industry what they have learned and gained during their academic pursuits.

Currently Science & Technology based research has been transformed because of inventions and innovations been made in the field of visualizations, characterization,

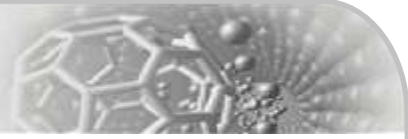
synthesis, materials & ability to commercially manufacture at 10^{-9} m scale level.

At the dimension of 10^{-9} m (billionth of a meter) the ability to create new and wonderful products and materials gets a tremendous boost, this is because at this scale we have the ability to work at atomic or molecular level and thus able to create things which are remarkably significant to current comparisons.

At 10^{-9} m (Nano) Scale humans reach to the level where they can create new and innovative applications pertaining to all the fields including Engineering , Science & Technology . Through the application of nano scale science in technology, new and improved applications pertaining to common man or specialized products such as energy efficient Light Emitting Diodes (LEDs), silver particles impregnated anti bacterial socks or even nano chips in computers are currently manufactured .

About The Project Training

This project training is focused about explaining applications of nano scale science and the resultant technological innovations due to the commercialization of resultant products in various fields. The students pursuing their bachelors or masters in the different fields of science and technology must know the advancements in their fields which is not a part of their syllabus. This project enables them to enhance their knowledge base, pertaining to the developments in their fields of study as a result of global developments in



nano science & technology which has changed the landscape of new research and product developments at all the industries and domains.

All the students who wish to undergo summer/ winter projects/ trainings in any industry can choose these projects as their training projects.

These projects are of **three/ six month** duration. The project includes online tutorials and assessments, and is assessed through project work and online assignments. All the participants have to submit a project report at the end of the project duration. After evaluation of this report, every student will get a certificate from **Nano Science and Technology Consortium (NSTC)**.

Students will get another opportunity to publish their **review paper*** written by them and evaluated by independent experts, after it which will be published in journals or posted on Nanoconnect.

Project Aim & Scope

These Projects for Engineering & Science students aim to give participants a broad view of latest and most in-demand technologies and its prospects, so that they could know about the various applications and new achievements of in their respective field. This would in turn enable them to give the best technology to their country. The project contains the various topics related to every field of technology and sufficient material on that topic.

(* Review paper need to be written by participants as per the guidelines provided by NSTC, for it to be eligible to be published in the Journal / Nanoconnect platform)

Benefits To Participants

Some beneficial points for participants after completion of this project may be:

- They will get to know that what is nano scale technology and how it is applicable in their fields.
- After completion of this project, participants will be aware of role of nanotechnology in advancements of the present technology in their respective fields.
- Participants will be aware of various revolutions in every field of technology such as in computer science, revolution could be continued in computer hardware right down to molecular gates and wires something that today's lithographic methods (used to make computer chips) could never hope to do. This could be possible only because of nanotechnology.
- Apart from their current syllabus contents and project topics, they can get some additional information from this project.
- This project will give them an additional certificate which could be beneficial in their career.

Domains

The following are few branches of engineering which will be covered in this project training: (Students can also opt or choose their areas of projects too in consultation with coordinator)

Students from any other field of Engg, or science can apply for the project and discuss the project with the Project coordinator.

- Civil Engg.
- Mechanical/ Instrumentations Engg.
- Electrical/ Electronic / Telecommunications Engg
- Chemical Engg.
- Computer Engg.
- Biomedical Engg.

The following branches of science will be covered in this project:

- Physics
- Chemistry
- Biology

Who should Apply (Prospective Participants)

The students who are pursuing B. Sc., M. Sc., B. Tech, M. Tech. and PhD in any field of Science and Technology can join this project.

Salient Features

- i. Do a project in the area of your study/ specialization.
- ii. Work on latest and most exciting areas.
- iii. Opportunity to publish a review paper.
- iv. Learn the new application areas.
- v. Get your project evaluated by experts.
- vi. Get certification of your project work.
- vii. Prepare a Business plan for your project for funding from government or VC's

Online Tutorials

The project training imparts through new online tutorial applications by which participants are guided on their project work 24x7. Participants can work on their topics according to their ease at college, home or where internet connection is possible. User id and password are provided to access this system which is more secured. One can share their views about the project with other participants and can be self evaluated regularly. Additional activities perform by participants such as quiz participation, submissions of views about topic and online assignments.

Project work is completed through online system under the guidance of project coordinator.

Non-Residential Training:

This is nonresidential project training meaning to this one can work on the project at home, college or office. The project training is powered through online learning management system which is the advance resource for imparting the training. The training works under the guidance of project coordinators at NSTC.

Information For Institutes

- Institutes imparting Engineering, technical & Science Graduate / Post Graduate level studies can form batches of students and register their students in this interactive project work.
- Any Institute which has more than 20 students registered in project work in one batch will receive one year free subscription of Nano Trends Journal.

- Institutes can take this project work for its students for its summer, winter or short duration projects which are compulsory for students.
- Opportunity to publish institutions' research, Review papers or articles in more than 40 STM (Scientific, Technical and Medical) Journals covering almost all major areas.
- Discounts for Institutions for subscribing the research journals in their fields through STM journals.

Sample Project Report

This includes the details of how to prepare the project report. Although this report is not a thesis report based on practical work yet it will contain almost all the headings of a report. Participants will get help from this in preparing their project reports according to their topics.

The stepwise headings and their contents will be:

i. Front Page

It will contain the project topic, name of the participant, name of the course i.e. “Nanotechnology Project for Engineering/ Science Students”.

ii. Acknowledgement

In this heading, participants can thank the several people for their assistance in the project.

iii. Contents

This will contain the chapter wise names of headings and subheadings with page numbers.

iv. Abstract

The abstract is an essential part of a report, providing a brief summary of the report. The abstract is a mini-version of the report. It should give a brief summary of the main sections of the paper. The abstract should be very concise - the maximum length being 50% of one page.

v. Introduction

It should contain some historical backgrounds of the project topic and also the objective of the project.

vi. Literature Review

Since this project does not have any experimental part, it will contain only literature surveys related to the topic. This heading will contain the detailed study of the topic starting from basic information to the latest work done. It may contain various sub-headings.

vii. Discussions and Conclusions

It will contain the discussion on various points of the literature review and the conclusions drawn from the discussions.

viii. References

All research papers' name and website addresses should be given here

Project Duration

The Project training duration is **three/ six months**.

Fee Details

Fee Details	3 Months	6 Months
Project Fee	Rs. 2500=00	Rs. 5000=00

Certification

The student is awarded the **Project Completion** certificate after the submission of project report and the completion of the project. All the students are instructed to complete the project in the specified time of 3 months/ 6 months. Failing to meet this timeline requires a re-registration as per the norms specified on NSTC website.

How To Apply

Students who want to apply for the “NSTC- **Certified Project Training**” can do so as follows:

- i. Download the application form and fill it properly.
- ii. Make a DD/Cheque of required fee in favor of “**Nanoscience and Technology Consortium**” payable at “Delhi/ New Delhi”.
- iii. Send the completed application form along with DD/Cheque (see fee details) and necessary documents* to:

Nano Science and Technology Consortium

A-105, Third Floor, Sector -63
Noida - 201301

Contacts: +91-120-4781216/4781217,
+91-9818206463

***Documents Required**

- **For Bachelor Students:** 10+2 mark sheet and certificate and also mark sheets of completed semesters (if applicable).
- **For Master Students:** Bachelor degree's mark sheet and certificate and also mark sheets of completed semesters (if applicable).
- **For PhDs:** Master degree's marks sheet and certificate.

Policy Regarding Change In Registration Information

Any change in information provided to NSTC at the time of registration e.g. address or any other information will only be considered through written communication by post. No other mode of communication will be accepted.

Note

NSTC reserves the right to change the commencement/ conclusion dates of the program, with or without notice to the participants. NSTC strives to make the kit (study material) available to the participants in time, however, in the exceptional events of any delay from NSTC's side (not the delay on account of postal/ courier agencies), in providing the study material, the participant will be compensated with an extended timeline accordingly.

The Director NSTC is the final authority in all matters pertaining to this program.



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Nano Science and Technology Consortium

A-105, Third Floor, Sector -63, Noida, UP,

INDIA 201 301

Mobile No. 9818206463

APPLICATION FORM

Summer/Winter Training & Project Work

Powered Through e-Learning Management System

Three Months () Six Months () Distance Participation Program

[please tick mark for the selection of program duration]

Form No:

Affix your latest
passport size
photograph duly
signed by you

(for office use only)

Enrolment No.

1. Name (Mr./Ms.) _____
First Middle Last

2. Father's Name _____

3. Postal Address (Capital Letters Only) _____

City: _____ Pin Code:

State: _____ Email: _____

Phone No. with STD Code: _____ Date of Birth
DD MM YYYY

Mobile No: _____

4. Academic Qualification:

Examination	Board/University	Year of Passing/ Semester Completion Date	% of Marks/Grade
Graduation			
Post Graduation			
PhD			
Any other			

5. Experience:

Present Company (Name & Address)	Designation	Total Experience	Present Responsibility

6. (a) **Nationality:** _____ (b) **Country of Residence:** _____

7. General information (✓) mark only relevant column

Sex

Male

Female

8. Crossed Demand Draft/Cheque No. _____ date _____

Drawn on _____ for Rs. _____

(Bank draft must be drawn in favour of "Nano Science and Technology Consortium". Payable at **Delhi** or **New Delhi**. Candidates are advised to write their name and address at the back of demand draft/ Cheque)

9. Documents to be attached with application form:

i) Total Program Fee draft at the time of submitting application form

ii) Certificates & mark sheets of highest degree passed.

iii) Passport size photograph

Note: NSTC accepts payable at par cheques only, other cheques are not acceptable.

Important Information

The program in which you are seeking participation, is NSTC's independent knowledge enhancement training program. The program neither promises any job guarantee nor provides any specific eligibility to pursue higher studies. In case of any dispute, it would have to be resolved through arbitration, under Arbitration and Conciliation Act 1996, by the sole arbitrator appointed by the NSTC, Noida. The jurisdiction of the same will be the Court of the District Gautam Buddha Nagar, Noida, India only.

Declaration by the Applicant

I hereby declare that I have read and understood the details of the program for which I seek admission. I have read scholarship & program terms & conditions given online and agree to the same. I have provided the necessary information in this regard. In the event that any information is found incorrect or misleading, my candidature shall be liable to cancellation by NSTC at any time and I shall not be entitled to refund of any fee paid by me to NSTC. I fully understand and agree that fee once paid is not refundable in any circumstances and is also not transferable.

Date:

Place:

Signature of Candidate

**Over 2,000 participants have already completed NSTC's
Nanotechnology programs**

NSTC's Program Participant Affiliations

- ▶ 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 Technologies
- ▶ Covansys
- ▶ Deloitte Consulting
- ▶ Department of Atomic Energy
- ▶ Dr. Reddys Lab
- ▶ DRDO
- ▶ Excel Hitech India Enterprises
- ▶ Grasim Industries Ltd.
- ▶ HCL Technologies Ltd.
- ▶ Hewlett Packard
- ▶ Hindustan Lever
- ▶ Hindustan Petroleum
- ▶ Honeywell Technology Solutions
- ▶ IIT Delhi
- ▶ IIT Guwahati
- ▶ Indian Agriculture 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

Nano Science and Technology Consortium

A-105, Level III, Sector-63, Noida, UP (INDIA), 201301

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