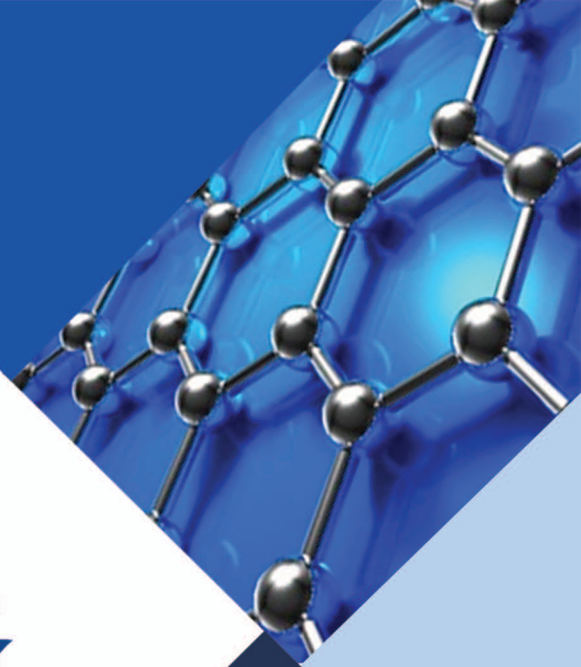
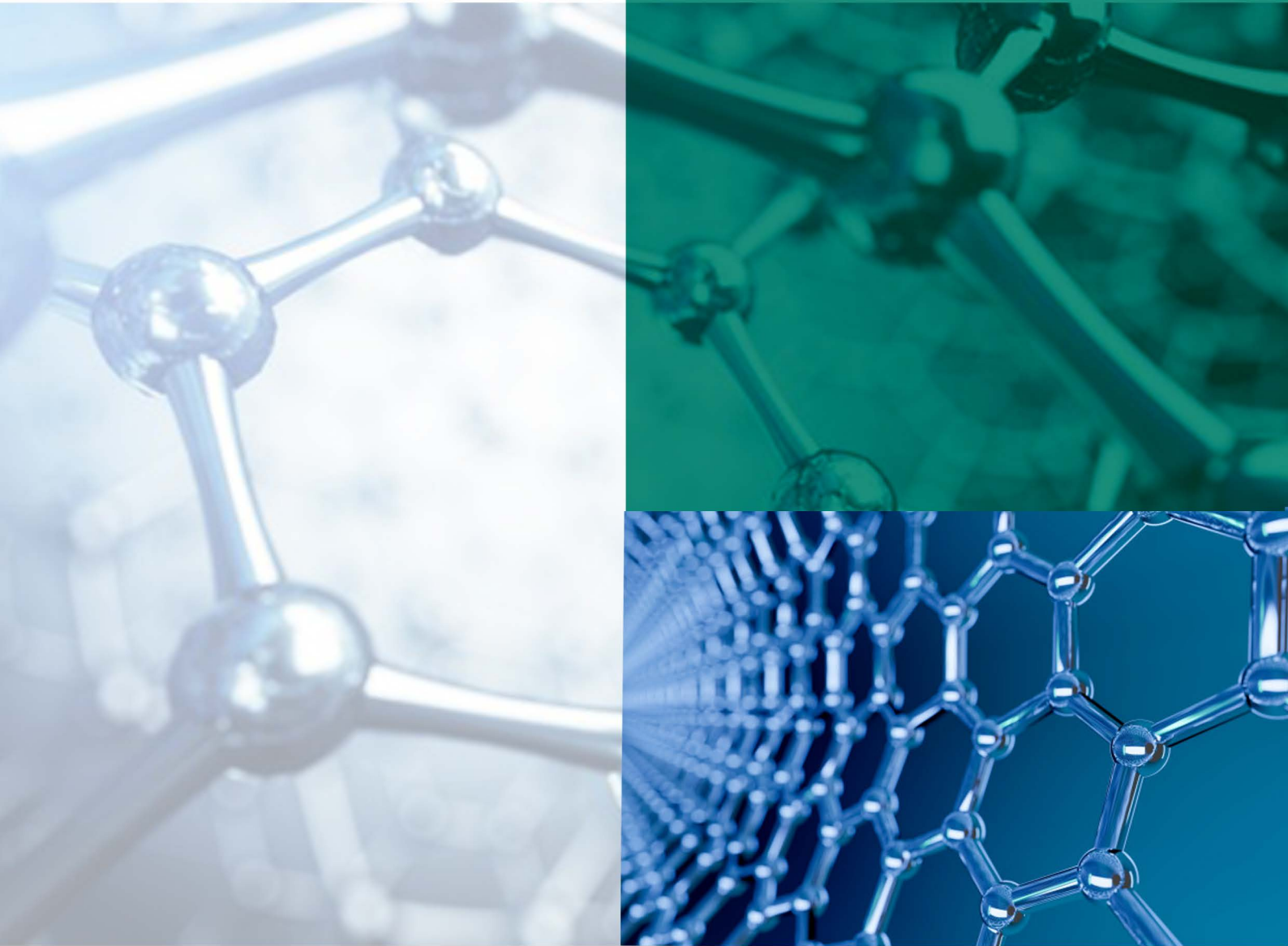




2020-2021





An Introduction to

Nanoscience and Nanotechnology Programs



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1- About Us

Nano Training and Education Group (NTEG) is a group of highly qualified university professors, experts and senior engineers in the field of nano materials, nano-bio science and technologies, running a basis for academic, scientific and technological training activities and events. NTEG aims to become a world-wide hub for nanotechnology deployment addressing development countries. Our grand challenges are with specific emphasis on university graduates, high school students and even new comers to nano industry.

NTEG coordinates all academic master programs in nano technology and nano science as well as a collection of short courses and non-degree programs. NTEG makes good use of the available infrastructures such as: educational lab network, research labs, professional human resources and standard protocols.

2- Teaching/ Educational Programs

- a. Non-Degree Programs
- b. Degree Programs

a. Non-Degree Programs

- Training of teachers and technicians programs (TOT)
- Skill enhancement programs
- Internship programs
- Summer schools
- Tailor made programs
- Short courses
- Integrated programs



● Training of Teachers and Technicians (ToT)

The main goal is to train trainers who are motivated to take part in continually improving abilities to teach or tutor nano science. Participants have the chance to further develop their competences as a trainer for Nano Technology.

The ToT model is intended to engage master trainers in coaching new trainers who are less experienced with nano topic or skill, or with training on nano technology. A ToT workshop can build a pool of competent instructors who can then teach the nano materials and nano technology to other people.

The Training for Trainers combines all necessary skills you will need as a professional trainer for high school students or undergraduate students.

Target Group

This program is targeted for 2 groups:

Beginner Level:

This target group consists of beginner trainers who can think and work at high schools or the first 2 years of bachelor level. The learning problems and requirements mainly relate to the general characteristics of the nano technology.

Professional Lecturer:

This target group consists of university lecturers who have strong background in any fields of science including Physics, Chemistry, Engineering, medicine, etc., being to get familiar with nano technology and nano science in order to hold educational programs.

Holding Time

The holding time is 2 to 4 weeks for each target group.

Mode of Delivery

This program could be offered offshore or onshore upon request.



June

July

August

● Summer School

This is a short-term summer activity to attract both local and international students and high school students. The program is surrounded by lots of social and leisure activities.

Summer schools also provide university students and graduates in the field of nano technology with educational experiences that would not be available to them within their normal schooling. This may encompass subjects that are not conventionally offered in schools (such as law, commercial issues, custom rules and regulations, etc.). It incorporates a wider variety of excursions and field trips than would be possible in day-to-day education.

Note:

Thanks to the 4 season weather and mild winter in Iran, this program may be held during winter holiday, on demand.

Holding Time

The holding time is 2 to 4 weeks (Summer/Winter holiday) for each target group.

Mode of Delivery

This program could be offered offshore in Iran or other host country, upon request.



● Tailor-Made Program

Each customer has his/her special needs. The tailor made programs are the answers to such need. It is a possibility to design special program from selected outlines just for a specific customer. The requirements for each program would be defined after finalization of courses' outlines. The number of students and duration of each program may be varied case by case. This programs may be newly designed or be presented merely as a new version of the available programs.



● Skill-Enhancement Program

A Skill-Enhancement Program is an occupation-based learning program aimed at introducing skills that have special economic value. There are 2 major branches as:

- Learnership programs
- Development training programs

A learnership program is a vocational training program with registered qualification. It facilitates the connection among structural learning, workplace experiences and industrialization techniques into a qualification. It is mostly useful for the newly graduated students with limited experiences in the professional market and start up runners to find a way of survival, success and progress.

A Development training program helps individual craftsman from private companies to acquire and enhance their skills, obtaining proper strategies and meeting the mass production targets. The learning activities include: classroom training, reading articles, demonstration, presentations and practice.

Holding Time

The holding time is up to 2 weeks for each program.

Mode of Delivery

This program could be offered offshore or onshore upon request.



● Internship Programs

● Industry programs in nanotechnology

By completing MSc program in nano technology, an internship program is an opportunity to test drive a career without making any serious commitments. It provides participants with experiences, lessons, and the tools they will need to get a full-time responsibility in the future. It is a period of working experience offered by an organization for a limited period of time.

An internship is an opportunity to test out all the skills that have been developed in university/college and see how they work in the real world.

Holding Time:

Work experience internships usually occur following completion of a Masters Program in 1 to 3 months.

Gains from an Internship Program:

Interns gain experience, develop skills, make connections, strengthen their resumes, learn about a job, and assess their interests and abilities. Some other gains come as follows:

- **New and improved skills and how to apply them**
- **Professional communications**
- **Networking**
- **Making connections**
- **Gaining experience and increasing marketability.**

No longer optional, an internship is one of the first things employers look on resumes.

Internship Duration:

Summer internships are about 4 to 12 weeks long.

Mode of Delivery

This program would be held offshore.



- **Short Courses**

Short course program is a great way to acquire new skills or to enhance (or refresh) the existing skills. Courses are presented in such a way that students are easily able to associate with the content.

Short-term certificate programs are courses of study that can be completed in a short period of time. They can help enhance a person's career or personal interests. The greatest benefits of short courses are that they are practical and convenient. They can be completed via campus learning or distance learning. They allow you to continue your current lifestyle while improving your skills and CV.

Holding Time:

The duration of courses are not standard. However, each course would range from one day to one month.



- **Integrated Program in Nanotechnology**

The Integrated Program (IP) is a program that allows for more time be allocated to enrichment activities. That is, the students have more time and flexibility to immerse themselves in a more broad-based education which will eventually lead to a target. In addition, the students enjoy more freedom in the combination of subjects.

The program would be a package including several inter-related topics which can be selected individually or one after another. The duration of each IP lasts from 1 to 3 summer session. It would be also possible to take the courses during regular academic session.

b. Degree Programs

- Nano-Chemistry
- Nano-Physics
- Nano-Materials
- Medical- Nanotechnology

Academic Program

This program includes a graduate level educational package on nanotechnology, support for practical training and laboratory infrastructures, and industrial partnership.

Definition and Purpose

This course is designed to educate high-level undergraduates to conduct research and study in one of the fields of nano science and technology as well as to collaborate on teaching at universities and higher education institutes. Graduates are able to work at industrial, medical and research centers in all fields related to nanotechnology. The graduates can also work at educational centers as masters.

Necessity and Importance

The importance of this course is to educate a researcher for working on nanoscience and nanotechnology.

Course Duration

The Master's Degree normally is four semesters that can be increased by one semester in special cases approved by the faculty's higher education council. The system for this degree is education and research oriented. The student completes the course until the due date by passing some theoretical courses and choosing a supervisor and a thesis.

Delivery Mode

The MsC package is categorized in 3 types of off-shore, on-shore and mixed type.

- On-shore type: The program is organized in the host university. Therefore, the students study in their own country. The Block course module is selected for this mode.
- Off-shore program: The students need to study in Iran. The type of delivery is in accordance with the regulations of the curriculum of Master program in Iran.
- Mixed type: A combination of running the courses between Iran and host country. The certificate is issued according to the agreement.

The certificate will be issued according to the agreement in three types of joint degree, service provider and the host university degree.



On-shore Program Advantages

Education in nanotechnology, especially in the developed world, can be costly. Students have to travel long distances, reside in a foreign country and pay expensive tuitions for at least a few years to obtain their desired degrees, and in the end, many students may immigrate abroad and their home country may never benefit from their education.

NTEG proposes a different strategy; with a fraction of the cost students can be taught in the comfort of their home land, their scientific publications and patents will be accredited to their home country, and they will receive their degrees from their home university. More importantly, students get a chance to work on the projects that are relevant to the needs and challenges of their own country. In this package, undergraduate students from relevant educational backgrounds such as material sciences, physics, biology, and chemistry are eligible to participate in the program.

NTEG is prepared to provide a complete educational package including a carefully designed syllabus, required course materials and reference texts, as well as informed instructors among prominent Iranian scientists and engineers in nanotechnology. The instructors will travel to the host country and present series of lectures on each subject followed by final examination. Note that the proposed program is designed to serve 15 students at a time.

The list below shows the other advantages of education in the host university:

- Capacity building in local academic human resources
- Research projects can be directed towards local needs and priorities
- Scientific publications and granted patents will be accredited to the host country
- Boosts networking of academics





3. List of Services

The NTEG team is service provider for the following activities:

- Nano Products or Laboratory Equipment Exhibitions for university or high school students
- International activities (i.e. Seminars, Presentations, Lectures,...)
- Events provider (i.e. visits from nano research centers, nano start-up firms, nano production lines, nano-laboratories...)

There are also plenty of available services for students rather than educational programs which could be offered by the team.

The services include airport and local transportation, hotel reservation, leisure time activities for evenings and weekends, short tours (short trip through Tehran and top Iranian cities for tourists to catch a glimpse of the beauty of Iran), staying in Boomridge Residences (village houses) with local people, etc.

Students may ask for full board or half board services based on their interests upon registration in any of the academic programs. List of services is provided with annual calendar.

4.How to Enroll

Following the release of the annual calendar, all applicants are required to complete the related forms and submit their request(s) online. NTEG administration team will process the applications and follow the requests no more than a week. After an initial screening based on the submitted documents, the shortlisted students will be invited for a video screen interview, where they will have the opportunity to talk about their education background and motivation to participate in the program.





5. Admission Procedure

For the application to be valid, the student must complete the online application form indicating the preferred program and submit all the required documents (given in each year calendar) including:

- Curriculum Vitae and Cover Letter in English
- The most recent academic records
- Proof of previous training in nano fields

All applications must be submitted in English. The applicants are responsible for the data submission and validation of the application components before the deadline. Only online applications will be accepted.

Administration office will send the confirmation letter to the applicants. Each applicant is requested to pay the tuition and send the receipt to the administration office. The final letter of admission will be sent to the applicants indicating the details of each program upon payment.



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