

Short Term Training Programme

on

CRYOGENIC ENGINEERING – Theory & Practice

February 23 – 27, 2015

Under

**TECHNICAL EDUCATION QUALITY IMPROVEMENT PROGRAM
(TEQIP-II)**

Coordinators

Dr. K. P. Desai

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Organized by



Department of Mechanical Engineering,
Sardar Vallabhbhai National Institute of Technology,
Ichchhanath, Surat - 395007, Gujarat, INDIA

About Surat:

Surat, situated on the bank of Tapti, is a top ranking industrial city of the country with clean wide roads and over bridges. It is well known worldwide for textiles, diamond, embroidery and zari industries. Large industrial base of Hazira with presence of Essar, Reliance, Larsen & Toubro, KRIBHCO, ONGC, GAIL, NTPC, ABG shipyard etc. is in close vicinity. Surat is situated on the main western railway route between Vadodara and Mumbai and connected to all part of the country through rail network. It is connected to Delhi by air. The institute is located at Ichchhanath on Surat-Dumas road at a distance of about 11 Km from Surat railway station and 5 km from airport.

About the Institute:

The institute, initially established as Sardar Vallabhbhai Regional College of Engineering & Technology in 1961, was later upgraded as a National Institute of Technology in 2002. It has been accorded the status of institute of national importance in 2007. At present, the institute runs six UG programs, eighteen PG programs and Ph.D. program in engineering disciplines and applied sciences. The cryogenics laboratory is established under mechanical engineering department of the institute. A few sponsored research projects and development projects are executed as well as currently undergoing at this laboratory.

About the Department:

The Department of Mechanical Engineering came into existence in the year 1961. The department has a team of 42 qualified and dedicated faculty members having specialization in various areas. At present the department is conducting a UG program (Mechanical Engineering), five PG programs (Mechanical Engineering, Turbo-machines, Manufacturing, CAD/CAM, and Thermal System Design) and research program leading to M.Tech. (Research) and Ph.D. degree.

About the Program:

The need for manpower with knowledge of Cryogenics is increasing with various programmes under the Department of Space and the Department of Atomic Energy of Government of India. Involvement of our country with accelerator programme of CERN and fusion programme ITER has resulted in increasing the demand of scientist and engineers having knowledge of cryogenics. On the other side it is a fact that still this subject is taught only at few institutes, may be as an elective subject or as a full course. It is with this background the present programme is organized having objective to acquaint the participants with basic knowledge of the subject. The participants will be exposed to the theory of cryogenic systems useful for their designing and analysis. Role of cryogenics for applications of space, fusion reactor, and particle accelerators will be explained during the course. The course will help beginners to have basics of the subject and other participants to have information about present state of the art and future research needs in the subject.

Course Content:

Cryogenics Fundamentals & Applications
Cryocoolers
Gas Liquefaction
Cryogenic Instrumentation
Cryogenic Heat Transfer
Cryogenic Materials
Cryogenic Insulations
Vacuum Systems
Cryopumping
Cryogenic Heat Transfer
Cryogenics for Fusion Programme
Cryogenics for Space Programme
Cryosurgery
Thermoacoustic Engines & Refrigerators

Program Faculty:

The resource persons for the program shall include faculty from the host institute, IIT-Bombay, ITER-India, IPR, Department of Space and other academic institutes.

Eligibility for Participation:

The training program is open to the faculty members from engineering institutes (degree & diploma), scientists working in research organizations, industry personnel and research scholars.

Registration Fee and Accommodation:

PG students & Research Scholars – Rs. 1000

Faculty members from academic institutes and research organisations – Rs. 2000

Participants from Industries – Rs. 4,000

There is no registration fee for SVNIT faculty members. Registration fee includes course kit and all meals for 5 days. Research scholars have to attach bonafide certificate or photocopy of their valid identity card along with registration form. The non-refundable registration fee should be sent in the form of a Demand Draft in favour of “Director, SVNIT” payable at Surat. Accommodation in hostels/guest house at the institute shall be provided to participants upon prior request on payment basis. The participants have to bear their own travelling expenses.

Last Date of Registration:

Hard copy of the duly filled and signed registration form along with registration fee should reach the coordinator(s) on or before **February 09, 2014**. However, scanned advance copy of registration form and demand draft may be sent through email for early registration and confirmation.

Contacts:

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