

About Kurukshetra:

Kurukshetra is a place of religious pilgrimage and historical significance. It is the land of Mahabharata and the place where sermons of 'Bhagwad Gita' were delivered. In medieval period, Thanesar, the old city, was the seat of power of Harshwardhana. Kurukshetra is well connected with rail/road. It is a railway junction on Delhi-Ambala section and is situated on National Highway No. 1 (G. T. Road). It is approximately 160 km from Delhi and 100 km from Chandigarh. NIT Kurukshetra is about 10 km from Pipli and 6 km from Kurukshetra railway station.

About NIT Kurukshetra:

National Institute of Technology, Kurukshetra (founded as Regional Engineering College, Kurukshetra in 1963) was conferred upon the status of Deemed University on June 26, 2002. Institute has B.Tech., M.Tech., MBA and MCA Courses in various disciplines with annual intake of about 1500 students. Institute also offers excellent facilities for advanced research in the emerging areas of Science and Technology leading to Ph.D. degree. The Institute has well qualified and dedicated faculty along with finest supporting staff, laboratories and other infrastructure. The syllabus and the curricula are constantly being updated to meet the growing demands and need of the country in different areas of technology. The infrastructure is geared to enable the Institute to turn out technical personnel of a high quality.

About School of Material Science & Nanotechnology:

School of Material Science & Nanotechnology was established in the year 2012 and runs four-semester M.Tech. programme in Material Science

and Nanotechnology and expecting to offer Ph.D. programme in different areas to keep synergy with the evolving innovations and developments in various fields of Material Science and Nanotechnology in near future. Apart from this, the school has been associated with highly sophisticated instruments facilities of department of Physics for advance research.

Course Coordinators:

Dr. J.K. Quamara

Professor, Department of Physics
Coordinator, School of Material Science &
Nanotechnology
N.I.T. Kurukshetra-136119

Dr. Ashavani Kumar

Professor, Department of Physics
Co-coordinator, School of Material Science &
Nanotechnology
N.I.T. Kurukshetra-136119

Dr. Anurag Gaur

Asstt. Professor, Department of Physics
N.I.T. Kurukshetra-136119

Important Dates:

Last date of Registration: Sept 01, 2014

Notification about selection: Sept 02, 2014

Confirmation from participants: Sept 05, 2014

Registration form should be sent to:

Head, Department of Physics
N.I.T. Kurukshetra-136119 (Haryana)
Soft copy via email: sctsm2014@gmail.com
Ph. 01744-233494, Mobile: 9896121499,
9896087178

One week Short-Term Course

(September 22-26, 2014)

On

Synthesis and characterization techniques of smart materials



Members:

Dr. Neena Jaggi
Dr. R.P. Chauhan
Dr. Ashok Kumar
Dr. C.R. Marriappan
Dr. Y. Dwivedi
Dr. A.K. Tripathi
Dr. R.S. Singh
Mr. Prakash Chand

Organized by:

**School of Material Science &
Nanotechnology**
National Institute of Technology
Kurukshetra-136119 (Haryana)

REGISTRATION FORM
Short Term Course on
**Synthesis and characterization techniques of
smart materials**
September 22-26, 2014

Name: _____

Date of Birth: _____ Designation: _____

Organization: _____

Address for correspondence:

_____ Phone: _____

E-mail: _____

Qualifications: _____

Teaching Experience: _____ Years

Industrial Experience: _____ Years

Accommodation required: Yes/No

Payment Details:

Draft No. : _____

Issuing Bank: _____

Amount _____ Drawn on _____

(Signature of applicant)

Sponsoring Authority:

Name: _____

Designation: _____

Organization: _____

Recommended: _____

Signature of Head of Institution/School with Seal

Introduction:

Materials in the nanometer scale have been studied over many years and many physical properties related to the nanometer size have been explored. A better fundamental understanding and various potential applications increasingly demand the ability and instrumentation to observe measure and manipulate the individual nanomaterials and nanostructures. Characterization and manipulation of individual nanostructures require not only extreme sensitivity and accuracy, but also atomic level resolution. It therefore leads to various advance techniques that play a central role in characterization and measurements of nanostructured materials and devices. The development of novel tools and instruments is one of the greatest challenges in nanotechnology.

Objectives of the Course:

This course will highlight recent developments and advances in smart materials and their Characterization techniques. The objective of this programme is to educate the young teachers and researchers about the smart materials based devices and to disseminate practical knowledge about this field. The course includes a series of informative lectures followed by laboratory visit to demonstrate the various characterization techniques e.g. XRD, XRF, SPM, SEM, UV-Visible, DC resistivity, PE loop, Image analyzer and PL spectroscopy in an actual lab environment.

Course Content:

An Overview of smart materials; Advanced techniques for synthesis of smart materials, Various characterization techniques e.g. X-Ray Diffraction, High Resolution Transmission

Electron Microscopy (HRTEM), Scanning Electron Microscopy (SEM), Scanning Probe Microscopy (SPM), X-Ray Florescence (XRF), UV-Visible Spectrophotometer, PL Spectroscopy, Raman Spectroscopy etc.

Who should attend:

Faculty members/research scholar/PG. students from academic institutes approved by the AICTE/UGC/MHRD and Scientists/Engineers working in Private/Public/ Government Organizations/ Industries, etc. can attend the course. Application should be made on the registration form and should accompany registration fee as below:

<u>Participant Category</u>	<u>Registration fee (Rs.)</u>
Faculty	2500/-
Students	1500/-
Industry	5000/-

Participants will be provided meals and tea during the sessions. However, accommodation can be arranged in hostel/guest house on nominal payment basis subject to the availability. No TA/DA will be paid to the participants. Participants will be selected on first-come-first serve basis up to a maximum of 30. The registration form, complete in all respects, duly forwarded by the Head of the Institution/Department, accompanied by demand draft of requisite amount and covering letter should reach on or before September 01, 2014. Registration fee is to be paid in advance through a crossed bank draft in favor of “**Director, NIT Kurukshetra**” payable at **Kurukshetra**.

The brochure with registration form can be downloaded from Institute website www.nitkr.ac.in