AICTE Sponsored Short Term Course on

Geometrical & Mathematical Crystallography with Applications to Structural studies

February 14 - 19, 2017

School of Materials Science & Technology
Indian Institute of Technology (BHU)
Varanasi, India

About the Course

Indian Institute of Technology, (Banaras Hindu University) is organizing a course on "**Geometrical & Mathematical Crystallography with Application to Structural studies**" from 14.02.2017 to 19.02.2017. The course is open to teachers from AICTE recognized management and engineering colleges. Only limited seats are available in this course. Merit and availability of funds will be taken into consideration while selecting candidates. The complete application should reach to the given address latest by 30.01.2017. The candidate will be informed of his selection in advance. If your candidacy is being sponsored by the institution, a formal letter will be required.

The main focus of the course is on the elements of geometrical and mathematical crystallography and its application on structural analysis. The course shall have foundation lectures on topics like basics of crystallographic groups, symmetry relationships between crystal structures and representations of crystallographic groups. This will be followed by interpretation of x-ray and neutron diffraction patterns. There will be hands on practicals on description of space groups and online training for determination of subgroups of space groups, crystal structure relations and pseudosymmetry, representations of space groups using Crystallographic Server. Practicals and tutorials on refinement of magnetic and nuclear structures using FullProf suite are also planned.

Course syllabus:

Review of Geometrical crystallography followed by Practical Session:
Mathematical representation of symmetry elements Representation of point group and space group
Basics of Group theory, character table, mode analysis
Group – Sub group relation, Group – Super group relation, Irreducible representation with working examples
Elements of x- ray diffraction, Experimental determination of space group and symmetries.
Refinement procedures (Le-bail and structural analysis)

Course coordinators

Dr. Chandan Upadhyay, SMST, IIT(BHU)
Dr. Akhilesh Kumar Singh, SMST, IIT(BHU)

Dates to remember

Last date for receiving applications: **Jan 30, 2017**
Intimation to selected applicants: **Jan 31, 2017**
Commencement of the course: **Feb 14, 2017**

Address for sending application & contact

Dr. Chandan Upadhyay/Akhilesh Kumar Singh
Convener, QIP-STC
School of Materials Science and Technology
IIT(BHU), Varanasi, India. 221005
Email: cupadhyay.mst@iitbhu.ac.in **,**
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QIP SHORT TERM COURSE
ON
"**Geometrical & Mathematical Crystallography with Application to Structural studies**"
14-19 Feb, 2017

Application Form

1. Name (block letters):

2. Designation & pay scale:

3. Organization:

4. Address for communication:
Pin code:
Ph. No.: **Fax No.**

E-mail:

5. Highest Academic Qualification:

6. Specialization:

7. Experience (in years):
(a) Teaching:
(b) Industrial:

8. Amount of TA required as per entitlement mentioned in the brochure (only for AICTE approved college teachers):

Please register me for the course on Geometrical & Mathematical Crystallography with Application to Structural studiesto be held at IIT (BHU) Varanasi.
Place:

Date: Signature of the applicant

SPONSORSHIP

Prof./Dr./Mr./Ms../Mrs./_____ is an employee of our institute and his/her application is hereby sponsored. The applicant will be permitted to attend the short-term course "**Geometrical & Mathematical Crystallography with Application to Structural studies**" at IIT (BHU) Varanasi during date of Short Term Course, if selected.

Date: Signature of Sponsoring Authority
Designation: Official Seal:

For applicants from Industries and Government Departments:
DD No. Date:
Bank:
Amount: Signature of the Applicant

Sponsorship fees for non AICTE candidates: Rs. 15,000 to be paid in favor of "The Registrar, IIT (BHU), Varanasi"

Accommodation

Candidates admitted will be provided free lodging and boarding. The boarding and lodging arrangement for all the participants is made in Gandhi Alumni Technology Center (IIT-Guest House) on twin sharing basis. Family accommodation is not available on campus. However, one may make his/her own arrangement in city hotels at his/her own expense. While boarding and lodging is given free, priority in admission will be given to participants who will bear TA on their own or charge the same to their respective institutes. If so, please mention the same in the application form.

About the city

Varanasi, also known as Kashi or Benares or Banaras, is one of world's oldest living cities. It is regarded as the religious capital of India. The city is located on the left bank of the holy river Ganga (Ganges), and is one of the seven sacred pilgrimage cities for Hindus. In the words of Mark Twain, the famous English author and littérateur: "Benaras is older than history, older than tradition, older even than legend and looks twice as old as all of them put together". Lord Budha gave his first set of sermons at Sarnath, located in the outskirts of Varanasi, nearly 2500 years ago. Buddhists from all over the world visit the holy city on pilgrimage. To be in Varanasi is an experience in itself. The majestic ghats on the banks of Ganga, morning sunrise, visit to famous temples and evening Ganga Aarati are some of the special attractions. Varanasi is also renowned for its rich tradition of music, arts, crafts and education. For more details, visit http://varanasi.nic.in/