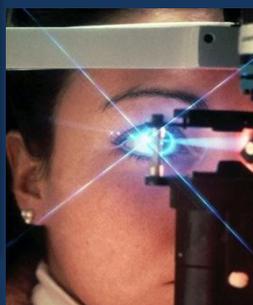
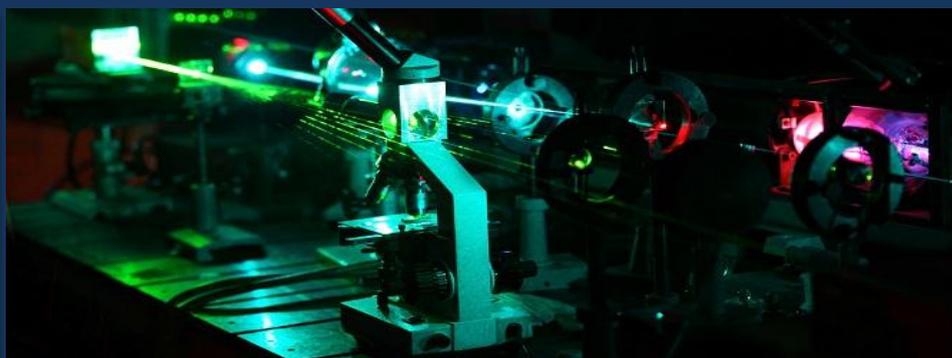


QIP SHORT TERM COURSE

LASER: FUNDAMENTALS AND APPLICATIONS

- [Welcome](#)
- [Course Content](#)
- [Registration](#)
- [Speakers](#)
- [Important Dates](#)
- [Accommodation](#)
- [Program](#)
- [How to Reach](#)
- [Contact Us](#)



Date

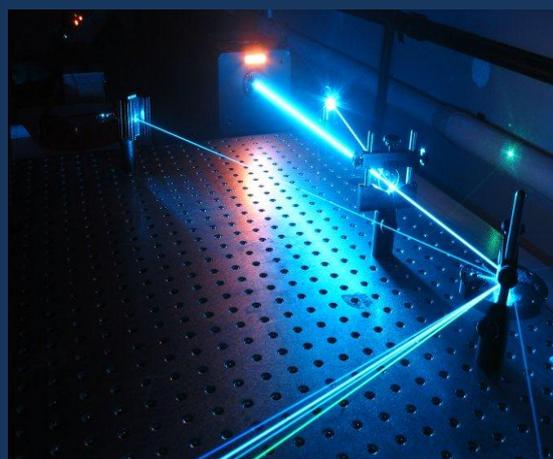
13-17 NOV 2017

Last Date to Apply

05 Sep 2017

Organizer

Dr. Manabendra Chandra
Department of Chemistry
IIT Kanpur



Course Objectives

This course will help the students to

- Understand the principles of laser
- Learn the properties of laser light
- Understand the operations of different types of lasers
- Become familiar with laser safety
- Learn various applications of lasers in Chemistry, Biochemistry, Nonlinear optics and many other areas
- Get chance to visit laboratories at IITK equipped with state of the art lasers, to get some hand on experience in operating lasers.

COURSE CONTENT

- **Laser Principles: concept of stimulated emission, Einstein's coefficients, population inversion**
- **Laser Set-up: concept of laser cavity, modes, gain and loss, gain bandwidth.**
- **Different types of lasers: continuous and pulsed lasers, history of lasers.**
- **properties of Lasers: monochromaticity, collimation, polarization, coherence etc.**
- **Different pulsing techniques: cavity dumping, Q-switching, mode-locking etc.**
- **Applications of lasers in**
 - **Chemistry & biochemistry,**
 - **Spectroscopy & imaging**
 - **Nonlinear optics, and**
 - **many other areas.**

REGISTRATION

Sponsored candidates: 30

- Persons interested in attending the course should fill the attached application form and send it to the coordinator by email (laser.qip.iitk.2017@gmail.com) as early as possible.
- Last date of sending the application form is September 05, 2017.
- Recommendation from the Institute is necessary.
- If selected, a caution deposit of Rs 1000/- (Rupees one thousands only, to be refunded to teachers who attend the course) in the form of a demand draft payable to "Continuing Education Program, IIT Kanpur" need to be submitted. (**Please do not send this caution deposit at the time of application.** The coordinator will ask for that. The candidate has to deposit the draft within seven days from the date of issue of offer letter. Otherwise offer letter will be cancelled.)

*Preference will be given to candidates who have a Bachelor's degree with specialization in an area relevant to the theme of the course. The above restrictions do not apply to applicants from Industry, R&D labs and self sponsored applicants.

Financial support

TA limited to AC-3 tier (shortest route). Boarding and Lodging expenses will be borne by the Coordinator of this course.

Registration Form can be found below

Registration Form

Laser: Fundamentals and Applications

Name: _____ Gender: M/F

Designation: _____.

Organization: _____.

Address for communication: _____.

_____.

Phone: _____ Mobile: _____.

Email:

Educational Qualification (with marks and class/division): _____.

_____.

Experience: _____.

Research Interest: _____.

Recommended By:

Name:

Designation:

Signature and Stamp:

Accommodation Required:

(Yes/No)

Applicant's Signature:

Date:

This part is required only after selection and if you are selected

Payment Details:

Draft No. : _____ **Date of Issuing:** _____

Amount: _____ **Bank:** _____

Applicant's Name & Signature:

Date:

SPEAKERS

Tentative Speakers

- Dr. Manabendra Chandra (IIT Kanpur)
- Dr. Pratik Sen (IIT Kanpur)
- Prof. Debabrata Goswami (IIT Kanpur)
- Dr. Ravindra Pandey (IACS Kolkata)
- Prof. P. K. Das (IISc Bangalore)
- Dr. Sovan Sen (JNU)

IMPORTANT DATES

- **LAST DATE FOR APPLY: 05 Sep 2017**
- **ACCEPTANCE NOTIFICATION: 12 Sep 2017**
- **COURSE DATE: 13 – 17 Nov 2017**

ACCOMMODATION

Accommodation will be provided in Visitor's Hostel Extension within IIT Kanpur Campus on twin sharing basis.



LASER: FUNDAMENTALS AND APPLICATIONS

PROGRAM

Coming Soon.....

HOW TO REACH

- The Campus of IIT Kanpur is located off the Grand Trunk Road near Kalyanpur, about 16 km west of Kanpur city. The campus is located on 1055 acres of land. The presence of lush green trees, manicured lawns, wide roads make the campus picturesque and well endowed. IITK campus is an ideal place for nature walks. The late November season is the full autumn in North India and the weather is usually very pleasant.
- **Arrival by TRAIN:** Kanpur Central Railway station is well connected to most cities in North, East and Central India. It is located on the Delhi-Kolkata train route and all major trains between these cities usually pass through Kanpur. IIT Kanpur is located at a distance of about 16 kilometers from the Kanpur Central Railway Station. It is possible to hire taxis (about Rs. 300 to 350) and auto-rickshaws (about Rs. 200) to IITK from the exit of the station through platform no. 1. It takes about 40 minutes to drive from Kanpur Central railway station to IIT Kanpur.
- **Arrival by FLIGHT:** The nearest airport is Lucknow Amausi Airport. IIT Kanpur is about 90 km drive from the airport and usually take 2 hrs to reach.
- At the entrance to the campus, you may be stopped by the security. Let them know that you are here for the QIP programme and they will let you in. Once you are inside the campus, you should ask for directions to VH. Go directly to VH front office and the office will direct you to your room.

CONTACT US

Dr. Manabendra Chandra

Department of Chemistry

IIT Kanpur

Kanpur - 208 016, (U.P.)

email: laser.qip.iitk.2017@gmail.com

All the applications and related queries should be directed to the above email address.