

Whom will the course benefit?

Faculty members, researchers and practicing professionals in the disciplines of material science, mechanical engineering, metallurgy and physics who are interested in understanding and application of microscopy.

Course Objective:

To enhance understanding of fundamental concepts and provide training in electron microscopy.

Course Contents:

- Ray and electron optics: Basics and advanced concepts
- Resolution and magnification
- Construction of an electron microscope
- Modes of operation of a scanning microscope
- Electron beam specimen interactions
- Image formation and interpretations
- Examples of image formation
- Generation of X-rays
- X-ray spectral measurement
 - a) Energy dispersive spectroscopy
 - b) Wavelength dispersive spectroscopy
- Quantitative X-ray analysis: ZAF corrections and determination of composition
- Specimen preparation

Faculty:

Prof. Chandan Srivastava, Dept. of Materials Engineering, IISc. will deliver the lectures.

Eligibility:

The course is meant for faculty of engineering colleges recognized by All India Council for Technical Education (AICTE), National Institutes of Technology (NIT's) and National Institute of Technical Teachers' Training & Research (NITTTRs). Selected teachers will be paid TA at actual subject to the limit of Three tier AC train/bus fare by the shortest route from the place of work to Bengaluru and back. **However, the maximum TA payable is Rs.3000/-**. They will be provided with a daily allowance of Rs.500/- (for 5 days only) towards boarding and lodging as per QIP rules, and will be supplied with the course materials. **The lodging charges will be Rs.300/- per day. Local participants will be paid DA @ Rs.150/- per day for 5 days.**

In addition, a few seats are available for non-sponsored (self-support) teachers, scientists from research labs, practicing engineers from industries and other interested persons on payment basis as under.

Course Fee:

Academic Institutes, Govt. R&D Labs: **10,000 INR**
Private Industries : **15,000 INR**

This will entitle them to participate in the course and receive the course material. Single room **accommodation** is available on the Institute campus at the **Hoysala House**. The participants have to request in advance along with the registration form for such accommodation. The lodging charges will be **Rs.1000/- per day** for self-support college teachers, and **Rs.1500/- per day** for industry participants, subject to availability of accommodation.



CENTRE FOR CONTINUING EDUCATION
Indian Institute of Science,
Bengaluru -560 012

QIP Short Term Course On "ELECTRON MICROSCOPY" 22-26 May 2017

Registration Form

(Please mail to reach before **22 April 2017**)

1. Name.....
2. Age:..... Sex: Male/Female
3. Office address
.....
.....
.....
4. Landline No. with STD code:.....
5. Mobile No.
6. Email ID:.....
7. Academic Qualifications
Degree subject year University
Diploma/B.Sc./B.A.....
B.E/B.Tech/M.Sc.
M.E/M.Tech./M.Phil.....
Ph.D. Completed/Pursuing/Intend pursuing:.....
Thesis title/Proposed Research Area:.....
.....
8. Teaching Experience.....(Years)
9. Industry Experience(Years)

10. Course taught/professional responsibilities.....
.....
.....
.....

11. Accommodation required Yes / No

12. Self-support candidate :
Academic Institutes, Govt. R&D Labs: **Rs. 10,000**
Private Industries : **Rs. 15,000**

Demand Draft No..... dated.....

I agree to abide by the rules of the QIP courses. If selected, I shall participate in the course for the entire duration.

Date: _____
Place: _____ Signature

The applicant Mr/Ms.....

.....
from our institution will be permitted to attend the QIP Short Term Course on “**Electron Microscopy**” to be held during **22-26 May 2017** at the Indian Institute of Science, Bengaluru, if selected. He/she will be granted necessary leave of absence.

It is certified that our college is recognized by AICTE Order No:.....Date:.....

Place: _____
Date: _____ Signature of Head of the Department

Signature and Seal of the Principal of the Institution

(Xerox copy of this form may also be used)

Intending participants may use the attached application form or a xerox copy of the same. Applicants from AICTE recognized colleges, NIT’s and NITTTRs are required to submit their applications sponsored by their colleges.

Non-sponsored (self-support) teacher applicants should send their application along with a **DD for the course fee** drawn in favor of “**Registrar, Indian Institute of Science, Bengaluru -560012**” payable at Bengaluru. The course fee will be **Rs. 10,000** for participants from **academic institutions and government research labs**, and **Rs. 15,000** for participants from **other organizations**.

Deadlines:

Receiving completed applications: **22 April 2017**

Intimation of selection: **27 April 2017**

Please mail the filled-in application form to:

The Officer-in-charge
Centre for Continuing Education
Indian Institute of Science
Bengaluru - 560 012
Telephone: 080-23600911, 22932055
Email: admin@cce.iisc.ernet.in/
office@cce.iisc.ernet.in

To reach on or before: 22 April 2017

QIP Short Term Course On “**ELECTRON MICROSCOPY**”

22-26 May 2017

Coordinator

Dr .Chandan Srivastava
Dept. of Materials Engineering

Sponsored by
AICTE, NEW DELHI



Centre for Continuing Education
Indian Institute of Science
Bengaluru – 560 012
<http://www.cce.iisc.ernet.in>