

**APPLICATION FORM**  
**Short Course on**  
**RF, Microwave and Terahertz Imaging**  
**Techniques (Nov. 05-09, 2016)**

Name:-----

Title/Position:-----

Organization:-----

Sex: Male/Female----- (for accommodation)

Mailing Address -----

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Email:-----

Phone(s):-----

Areas of interest:-----  
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Accommodation Required: Yes / No

Details of Fee (Demand Draft / Online):

DD No. / Trans. ref. no.-----

Dated:-----Amount:-----Bank:-----

Date: Participant Signature

Forwarded by Head of Institution:  
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**Contact Details**

**Course Coordinator:**

**Dr. M. Jaleel Akhtar**

Associate Professor, ACES 326  
Department of Electrical Engineering  
Indian Institute of Technology Kanpur  
Kanpur - 208016

Phone: +91-(512)-259 6523

Fax: +91-(512)-259 0063

Email: [mjakhtar@iitk.ac.in](mailto:mjakhtar@iitk.ac.in)

<http://home.iitk.ac.in/~mjakhtar/>

**Course Web Site**

[http://www.iitk.ac.in/web\\_mimt\\_lab/workshop1/index.html](http://www.iitk.ac.in/web_mimt_lab/workshop1/index.html)

**Microwave Imaging and Material  
Testing (MIMT) Laboratory at IIT  
Kanpur**

[http://www.iitk.ac.in/mimt\\_lab/](http://www.iitk.ac.in/mimt_lab/)

**Important Dates:**

**Application Deadline: 10<sup>th</sup> Oct., 2016.**

**Acceptance Notification: 15<sup>th</sup> Oct., 2016.**

**All the participants of the  
workshop would be provided a  
Certificate of Participation.**

**A Short Term QIP Sponsored  
Course on**

**RF, Microwave and Terahertz  
Imaging Techniques**

**November 05-09, 2016**

Venue:

IIT Kanpur, Kanpur

Organized by:

Department of Electrical Engineering  
Indian Institute of Technology Kanpur



## COURSE OBJECTIVE

The main objective of the course is to provide the participants an insight into various aspects of the RF, microwave, mm-wave and Terahertz imaging techniques for biomedical, industrial and security applications. The participants would be exposed to the new emerging topics in the field of the RF and THz imaging involving the methodologies adopted for various applications. The course would explain various approaches presently being employed for sub-surface and lateral imaging of test objects and media. The course would start with a brief theoretical foundation of RF, microwave and THz techniques from the imaging perspective. In addition, the participants would be exposed to the state of the art modeling and simulation software currently being used for various imaging schemes. Finally, it would be tried to provide a working demonstration of experimental setups for various RF imaging applications.

## Intended Participants

### (Who can attend)

The course is designed for people from academia, R & D institutes and industry working in the field of RF techniques, electromagnetic metrology, microwave remote sensing, microwave non-destructive testing techniques, RF systems for various industrial applications, THz devices and techniques etc. The course is equally suited

for professionals and graduate students desirous of working in the challenging RF and THz imaging field.

**QIP Candidates:** The teachers of the AICTE approved Engineering Colleges are eligible under this scheme. Faculty members from the streams of Electronics & Communication Engineering, and Electrical Engineering can apply under this program. The seats are limited, which would be filled on first come first serve basis and the candidate's field of research interest.

## Course Content

Basics of RF, microwave and THz techniques, Electromagnetic scattering: direct and inverse problem, Inverse problem from mathematical point of view, Electromagnetic field and scattering parameters, Sub-surface imaging and Riccati equation approach, UWB antennas, Concept of metamaterials, Metamaterial based lens and super-resolution imaging, Lateral imaging techniques, Millimeter and THz imaging techniques for security and biomedical applications, THz imaging and spectroscopy, RF and THz testing techniques.

## APPLICATION PROCEDURE

**QIP Candidates:** Application in the attached form should be sent to the coordinator with a caution deposit of Rs. 1000/- in the form of a Demand Draft favoring “**Continuing**

**Education Programme, IIT Kanpur**”. The caution deposit fee will be refunded for all QIP participants who attend the course. The QIP participants will be paid TA/DA by A/C three tier for attending the course. The DA will be paid as per rules, adjusted against boarding and lodging at IIT Kanpur.

**Non-QIP participants** can send the filled application form along with appropriate registration fee (mentioned below) using a Demand Draft in favor of “**RF Terahertz Imaging Techniques**” to coordinator (Prof. M Jaleel Akhtar).

The registration fee can also be paid online. The details are given below:

Acc. Name: **RF Terahertz Imaging Techniques**

Account Number: **36058030714**

Branch: **State Bank of India, IIT Kanpur**

IFSC Code: **SBIN0001161**

Accommodation for Non-Student delegates would be arranged in the guest house of IIT Kanpur depending upon the availability. The registration fee includes the boarding and food charges for Non-QIP candidates under Non-Student category.

### PARTICIPANTS REGISTRATION:

<u>FROM</u>	<u>FEES</u>
1) Industry/R&D Organizations	Rs. 15,000/-
2) Academic Institutions (Non-QIP candidates)	Rs. 12,000/-
3) Students	Rs. 6,000/-

The decision regarding the acceptance for the course will be taken by the coordinator after receiving the duly completed application with appropriate demand draft before the mentioned deadline.