



AICTE Sponsored QIP Short Term Course

on

Microwave/Millimeter Wave Devices and their Applications

23-28 September, 2019



Course Coordinator

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Jointly Organised by

Department of Electronics Engineering
&

Department of Physics
Indian Institute of Technology (BHU)
Varanasi-221005

OBJECTIVE AND SCOPE

Microwave antennas and passive components are the backbone of wireless communications and remote sensing. Basic knowledge of microwave components is essential to develop reliable wireless communication system and monitoring of earth resources using remote sensing. This course attempts to provide refreshing of the fundamentals as well as recent developments in the field of microwave antennas and passive components for various applications. Detail design steps of the microwave antennas and passive components, starting from text book knowledge to implementation using commercial full wave simulators in different planar printed circuit board guiding structures will be discussed. Special emphasize will be given on the planar microwave antennas including antennas for 5G applications, reconfigurable antennas, substrate integrated waveguide technology. The course is also developed to provide the basics of the remote sensing techniques to undertake research in this exciting and challenging area for earth resource monitoring. The bistatic scatterometer measurements in the full polarimetric modes for crop/soil parameters estimation will be covered.



ABOUT IIT (BHU)

IIT (BHU), a public engineering institution is situated in the magnificent campus of Banaras Hindu University founded by the great visionary Pt. Madan Mohan Malaviya Ji in 1916. IIT-BHU which was formed in 1969 by amalgamation of three colleges (BENCO, MINMET and TECHNO) has been converted into IIT (BHU) on 29th June, 2012. At present, IIT(BHU) has 15 departments and three inter-disciplinary schools.

COURSE CONTENT

The course will include lectures and practical sessions. Following topics to be covered in the course:

- Microwave Active and Passive Devices
- Applications of Microwave/Millimeter Wave
- Millimeter Wave Packaging
- Massive MIMO Antennas for 5G
- Reconfigurable Antennas
- Modeling and Simulation of Passive Devices using ANSYS HFSS
- Metasurfaces/Frequency Selective Surfaces as Radar Absorbing Structure
- Principles of Remote Sensing,
- Spectral Characteristics of Earth's Surface
- Bistatic Scatterometer Measurements
- Measurement Techniques

COURSE FACULTY

Faculty members/experts from premier institutions like IITs, NITs, reputed Institutions, Research Organizations, and Industries.

WHO CAN ATTEND

Faculty members of University/ Engineering Colleges approved by AICTE working in the departments of Electronics/Electrical Engineering and Applied and Pure Physics/ other interested department are eligible to attend the course.

ELIGIBILITY

B.E. / B.Tech. / M.E. / M.Tech./M.Sc. or equivalent degree in Electronics/ Telecommunication / Electrical Engineering.

FINANCIAL ASSISTANCE

Limited number of, first 30, participants from AICTE approved institutions will be eligible for to and fro railway fare via the shortest route in III AC class between the place of work and Varanasi. Further they will be provided free boarding on twin sharing basis in the institute guest house/ hostels during the period of the course. Family accommodation is not available on campus. However, one may make his/her own arrangement in city hotels at his/her own expenses. Candidates attending the course in full only will be eligible for TA. For all other participants no TA will be paid by IIT(BHU) Varanasi.

REGISTRATION PROCESS

Faculty members from AICTE approved Institutions are eligible to attend the course. Participants should bring a letter of nomination from their head of institution stating that they are being deputed for the course.

There is no registration/ accommodation fee. However, a Demand Draft of Rs. 2,000/- (drawn in Favor of “Registrar, IIT(BHU), Varanasi” payable at SBI, IT BHU Branch (code 11445), Varanasi) should be enclosed with the application form which will be refunded to the participants attending the course. No refund will be given to the absentees.

Total reserved seats for QIP candidates are 30 which will be awarded according to the date of applications received.

The DD along with completed application form is to be sent to the course coordinators latest by September 10, 2019. Please also email scanned copy of the registration form and the demand draft at mmwda.stc@gmail.com.

ABOUT THE CITY

The holy city of Varanasi which is the oldest city on earth is also known as the city of temples and learning. Being situated on the banks of the holy river Ganges, Varanasi is a place of great historical and cultural importance. This religious capital of India is famous for temples of Lord Shiva, Buddha (at Sarnath) and Sankat Mochan etc. Varanasi is the seat of spiritual and modern learning, keeping pace with modern advanced knowledge. The city is famous for silk fabrics, perfumes, artistic brass and copper wares and a variety of handicrafts. This vibrant city with multiple dimensions of knowledge and



HOW TO REACH THE CAMPUS

Varanasi is well-connected and accessible to major Indian cities. Closest railway stations are Varanasi Junction (BSB) which is about 8 kms from the campus, Pandit Deen Dayal Upadhyaya (formerly called Mughalsarai) (DDU) which is about 20 kms from the campus, and Manduadih (MUV) which is at a distance of 7 kms from the campus. The Varanasi airport is situated about 30 kms from the campus. There are daily domestic flights to and from Varanasi to several cities in India. The most convenient mode of transport within the city is Auto-Rickshaw and E- Rickshaw. AC cabs are also available by Ola/Uber/Varanasi Cab.



PARTICIPATION CERTIFICATE

Certificate of participation will be issued to all the participants only after successful completion of the course.

IMPORTANT DATES

Last date for receiving application: **September 10, 2019**

Intimation to the applicants: **September 12, 2019**

Enquires should be addressed to:

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Department of Electronics Engineering,
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Varanasi – 221 005

E-mail : mmwda.stc@gmail.com

Mobile: 91-9450533003, 8318478856

WhatsApp: 9450533003

Fax : 91-542-2368428

QIP Short term course on “Microwave/Millimeter Wave Devices and their Applications”, September 23 - 28, 2019

REGISTRATION FORM

1. Name (block letter):
2. Designation & pay scale:
3. Organization:
4. Address for communication:
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.....
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 [Microwave/Millimeter Wave Devices and their Applications](#) to be held at IIT (BHU) Varanasi.

Refundable Security Deposit Details:

DD No.: Date:

Bank: Amount: ₹ 2000/-

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 on “[Microwave/Millimeter Wave Devices and their Applications](#)” at IIT (BHU) Varanasi during date of STC, if selected.

Date: Signature of Sponsoring Authority

Designation:

Official Seal: