



# भारतीय प्रौद्योगिकी संस्थान गुवाहाटी Indian Institute of Technology Guwahati

Short Term Course/Workshop/Quality Circle Symposium



## Modern Analytical Tools for Bio-medical Research and Teaching.

February 22<sup>th</sup> -26<sup>rd</sup>, 2021

Conducted by :  
Department of Biosciences and Bioengineering



Organized by :  
Knowledge Incubation for TEQIP  
Centre for Educational Technology  
URL: <http://www.iitg.ac.in/cet>

## ABOUT THE COURSE / EVENT

Modern analytical tools are the integral part of the biomedical research to explore and interpret the complicated biological pathways or pathological disease conditions. Development of newer or improved version of existing high-end equipment is a continuous process and a short training program is essential to update the researcher community. We have divided the course in the different topics to cover major molecular tools available for medical biotechnology application. The topics covered under the short-term program has two components, **One Theory Session** which will deals with the underlying basics behind the technology or approach other is **Online Lab Session** to give virtual experience to enable participant acquainted with the technical issues and methodology associated with the particular technique.

Faculty member of IIT Guwahati will deliver lecture.

## COURSE CONTENTS

The topics covered under the short-term program has two components, **One Theory Session** which will deals with the underlying basics behind the technology or approach other is **Online Lab Session** to give virtual experience to enable participant acquainted with the technical issues and methodology associated with the particular technique. The tentative list of topics covered are as follows-

1. **Molecular Tools in diagnostics and designing experiments.**
2. **Imaging techniques in medical biotechnology.**
3. **Potentials of Immunological tools in diagnostics and biomedical research.**
4. **Cell biology techniques and their application in biomedical research.**
5. **Spectroscopic techniques and their utility in designing experiments.**

### Topics to be covered

- **Session 1: Molecular Biology techniques:** We have included question based session and live laboratory demo sessions to explain the concepts.
- **Session 2: Immunological Tools:** We have included live laboratory demo sessions to explain the concepts and working principles of different techniques.
- **Session 3: Imaging techniques:** We have included question based session and live laboratory demo sessions to explain the concepts.
- **Session 4: Cell Biology Techniques:** We have included question based session and live laboratory demo sessions to explain the concepts.
- **Session 5: Spectroscopic techniques:** We have included question based session and live laboratory demo sessions to explain the concepts.

## **ELIGIBILITY**

The course/event is open to Faculty members/Students (strike off, whichever is not applicable) from TEQIP mapped Institutions/Engineering Colleges/ATUs. No course fee is charged.

## **IMPORTANT DATES**

The last date for the receipt of duly sponsored application:

By email: scanned copy: 17/02/2021

Intimation of selection: 19/02/2021

## **SELECTION CRITERIA**

Number of seats: 30.

Selection will be based on First cum first served basis.

## **ADDRESS FOR CORRESPONDENCE**

Name: Dr. Vishal Trivedi

Course Coordinator: Dr. Vishal Trivedi

## **Department of Biosciences and Bioengineering**

Indian Institute of Technology Guwahati

Guwahati- 781 039



## SPONSORSHIP / NOMINATION CERTIFICATE

Prof/Dr./Mr./Ms./Mrs./.....

.....

is an employee of our institute and his/her application is hereby sponsored/nominated. The applicant is permitted to attend the short-term course “**Modern analytical tools for Bio-medical research and teaching.**” at IIT Guwahati during DD/MM/YY to DD/MM/YYYY if selected.

I also certify that our institute/college is under the “Institution List” of 3<sup>rd</sup> phase of TEQIP Project of MHRD.

Date

Signature of Authority

Designation

Official Seal

Selected participants will be informed by e-mail. The duly sponsored/nominated application form should be mailed to:

**Dr. Vishal Trivedi**

**Department of Biosciences and Bioengineering**

Indian Institute of Technology, Guwahati

North Guwahati, Guwahati-781 039, Assam

Ph. No. 0361-2582217(O), 9678738102(M)

Email.: xxxxxxxxx@iitg.ac.in

## **ABOUT TEQIP**

**TEQIP** conceived in pursuance of the NPE-1986 (revised in 1992) by Govt of India as a long term program to be implemented in different phases. After successful execution of TEQIP II, TEQIP III starts from 2017-18 as Central Sector Scheme with a focus on the Low Income States, Northeast, Hill States and Islands. The third phase of TEQIP is also special in a way that it incorporates twinning arrangements between mentee & mentor institutions with an emphasis on Focused Training (PT) and Focused Interventions from IITs in terms of deliverables and accountability. KIT, established at IIT Guwahati under 2<sup>nd</sup> phase of TEQIP is a focal point for training Faculty, Staff and students from TEQIP-III institutions in Knowledge Engineering, Content Creation, Improving Teaching, Pedagogy & administrative skills in identified niche areas/disciplines.

## **ABOUT KIT**

KIT (**K**nowledge **I**ncubation **C**ell for **TEQIP**) at IIT Guwahati functions as a multi-disciplinary as well as interdisciplinary Innovation Incubation Centre with a focus to impart Knowledge, infusing innovation and leading a path to achieve academic excellence. Its activities are in the area of improving quality of technical education, incubator of Innovative Ideas; implementer of contemporary pedagogy practices and development of Learning Content in Technical institutions while mentoring them.

## **ABOUT IIT GUWAHATI**

### **SNAP OF CAMPUS**

IIT Guwahati campus is spread over a sprawling 785 hectares plot of green land on the north bank of the river Brahmaputra around 25 km from the heart of the city. With hills and vast open spaces, the campus provides an ideal setting for training. Details on how to reach IITG Campus are available on the institute website

**Website: [www.iitg.ac.in](http://www.iitg.ac.in)**