

THREE DAYS WORKSHOP ON

“Analytical/ Bioanalytical Instrumental Methods of analysis in life and chemical Sciences and Biotechnology (ABIMA2019)”
24th-26th July 2019

REGISTRATION FORM

1. Name
2. Affiliation and Designation
3. Address with e-mail ID & cell phone
4. Age and Date of Birth
5. Academic qualification
6. Accommodation required: Yes/No
7. Registration fee Rs:

NEFT/RTGS transfer or DD details

No.: **Date:**

Bank

8. Signature:

Note: Accommodation in students' hostel room is free. But guest room accommodation will be charged @ Rs 100/- per day



**Department of Biotechnology
Bannari Amman Institute of
Technology
Sathyamangalam -638 401
Erode-Dt, Tamil Nadu**



The Institute

Bannari Amman Institute of Technology (BIT) is an AICTE approved, ISO 9001: 2000 certified self-financing autonomous Engineering college

affiliated to Anna University, Chennai, Tamil Nadu. It is a vibrant institute, situated in a serene surroundings near the banks of River Bhavani at the foot hills of Nilgris, Sathyamangalam Erode-Dt, Tamil Nadu. It was established in the year 1996 in sprawling campus of 180 acres with a built-up space of more than 20 lakh square feet by the Industrialist & Philanthropist Shri.S.V. Balasubramaniam, Chairman of the Bannari Amman Group, a leading corporate house in South India, Coimbatore with a vision to uplift rural areas by imparting technical education of global standard to the rural people. The Institute offers MCA, MBA, five year integrated MSc software engineering, 13UG (BE/BTech) & 15 PG (ME/MTech) programmes in Engineering /Technology & research programmes (PhD/MS). It has many laurels to its credit such as accreditation by NAAC with A grade, NBA accredited courses, Best Engineering college award by ISTE, New Delhi, Mindlogicx Infratec Ltd Silver medal award for the best institute-industry linked engineering college instituted by AICTE-CII for the year 2012, 76th Ranking among Top 100 Best Engineering Colleges in India by NIRF, MHRD, Government of India during the year 2018, DSIR recognition for Research & Development Ranked among the top colleges in leading surveys conducted by India Today, CSR, Outlook & Career 36

The Department

The Dept. of Biotechnology was established in the year 2002. It offers B.Tech & M.Tech in Biotechnology under Anna University, Chennai & accredited by NBA. The Department has well

qualified & experienced faculty members & well equipped laboratories to teach & conduct research in the multifarious areas such of biotechnology. The department had organized many seminars, staff/faculty/entrepreneurship development programs & workshops sponsored by Anna University, AICTE, DRDO, DST, DST-FIST, SERB, DBT, CSIR & TNSCST related to Biotechnology. The Department also has government funded research projects, & spearheads a Technology Business Incubator (BIT-TBI) a joint venture of GoI & BIT to encourage young entrepreneurs to convert their novel ideas into commercial products. The thrust area of this TBI is the application of Biotechnology in agriculture, rural & industrial sectors. The Department has also been recognized as a research centre by Anna University, Chennai for guiding research scholars leading to PhD.

The Workshop & its Objectives

Instrumental methods of chemical analysis have become the most important means of getting information in diverse areas of science and technology. The speed, high sensitivity, low limits of detection, simultaneous detection and quantification capabilities, and automated operation of modern instruments compared to the traditional methods of analysis, have made them predominant in research labs, educational institutes, industries etc. Professionals in various scientific fields draw important conclusions, solve problems, and advance their fields using instrumental measurements.

Instrumental methods are part of analytical chemistry and advanced biotechnology is inextricably linked to analytical chemistry. With the advancement in life sciences and modern biotechnology and the increased applications of this technology, the development of concepts, techniques and instrumentation are very much required for these fields. The growth of research and development is highly dependent on the validity and precision of the results obtained in experiments performed. One of the major issues of biotechnology experiments is the time dependent of many results and there is a possibility for human error or other forms of handling errors due to a large time interval between performing experiment and obtaining result and these errors are minimized using analytical equipments where one can obtain accurate and precise result within a small stipulated time gap. In addition the analytical equipments require only small size of sample for the analysis. Unlike classical methods, instrumental methods detect and quantify substances, metabolites etc at trace concentrations. With the development of biotechnology, the usage of analytical equipments has increased by many folds. The areas of biotechnology such as nanotechnology, cancer biology, bioseparation, genetic engineering and many more are dependent on the analytical equipments for most of their experimental analysis. Various food and pharmaceutical industries rely upon the analytical techniques like FT-IR, GC-MS, NMR, Raman spectroscopy for the quality analysis of the products. Hence all scientists, researchers, faculty members of biotechnology, life and chemical sciences etc are forced to have a fundamental knowledge and understanding of instruments to solve problems and obtain precise, accurate and valid information. Hence

researchers, faculty members and scientists have to be exposed periodically on the working, application and handling of various modern analytical instruments to promote precise, accurate and speedy research in diverse areas of biotechnology through workshops/training on analytical equipments. The present workshop is aimed towards this objective.

The workshop involves lectures and demo experiments to know the theory, operation and applications of the following instrumental methods

List of analytical methods to be covered

Thermo analytical methods

Simultaneous Thermo gravimetric Analysis-Differential Thermal Analysis (NETZSCH STA 2500 Regulus), a highly equipped thermoanalytical techniques that records simultaneously TG and DTA thermo grams of solid and liquid samples. The thermal degradation kinetics and mechanism, phase changes, thermal stability, flammability, moisture content, life time prediction, etc of materials calorific values of biomass etc can be analyzed for various applications

Electroanalytical methods

Electrochemical Workstation CHI600E -An electrochemical equipment to conduct Cyclic voltammetry, linear sweep voltammetry experiments, corrosion studies, bulk electrolysis, evaluation of enzyme electrodes etc. Used to determine the capacitance of electrochemical interfaces, formal potential and diffusion coefficient of analyte ion and to understand the electrochemistry of analyte ion.

Chromatographic methods

High Performance Liquid Chromatography - Agilent 1220 Infinity series HPLC- Binary

gradient with analytical C18 column with UV-VIS (VWD) and RI detectors. Identification of compounds in mixture, purity of biomolecules, separation of compounds in a mixture etc, monitoring of biochemical reactions

Spectroscopic methods

UV-VIS, FT-IR and NMR in chemical and life sciences and Biotechnology -Theory, instrumentation and applications. Interpretation of bimolecular spectra of UV-VIS, NMR and FT-IR instruments.

Resource Persons

Professors /Scientists from reputed educational/research institutes and Bannari Amman Institute of Technology will handle the sessions

Dates to remember

Workshop Dates : 24th -26th July 2019

Last date for Registration : 22nd July 2019

Last date for remitting fee: 22nd July 2019

Venue

Old Mechanical Engineering Seminar Hall
Bannari Amman Institute of Technology

Eligibility of participants

Faculty members, students, Scientists from life and chemical sciences, physicists, researchers, industrialists, biotechnologists, biomedical & pharmaceutical scientists, nanotechnologist, analytical chemists, polymer & material scientists etc.

Registration fee# (INR)

Students : 1500

Research Scholars : 1800

Faculty/Scientists : 2000

Industry persons : 2500

Note: *The Fee includes registration kit, refreshments, breakfast, lunch & dinner. Accommodation in students' hostel room is free but guest room accommodation will be charged @INR 100 per days*

How to remit fee

As bank DD from any nationalized bank favoring "The Principal, Bannari Amman Institute of Technology payable at Sathyamangalam

or

By online via NEFT/RTGS transfer favouring Principal (ABIMA 2019)

Bannari Amman Institute of Technology

Bank Name & Branch: Axis Bank Ltd,

Sathyamangalam Branch, Erode-Dt,

Tamil Nadu, India

SWIFT code: AXISINBB090

SB Account No.: 368010100027849

IFSC Code: UTIB0000368

Indicate the purpose & address of the sending person.

How to register

The participants have to register by sending the scanned copy of the Registration form along with scanned copy of DD or e-receipt of NEFT transfer by e-mail and the hard copy by post to the CONVENER –ABIMA 2019

Note: The total number of PARTICIPANTS is restricted to FORTY (40) – first come first served basis.

Contact (Convener)

Dr. K. Subramanian, Professor

Convener –ABIMA2019

Department of Biotechnology

Bannari Amman Institute of Technology
Sathyamangalam, Erode – 638 401, India
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How to reach BIT

BIT is located at 5 Km from Sathyamangalam towards Athani. Sathyamangalam is well connected by road from Erode & Coimbatore. The nearest railway stations are Erode (62 Km) & Coimbatore (70 Km).

Organizing Committee

Chief Patrons

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Dr S.V.Balasubramaniam

Director/Trustee

Dr. M.P.Vijayakumar

Patron

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Dr V.Vijayakumar, AP./Chemistry

Dr. Malathi Balasubramanian, AP./ BT

Organizing committee

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Mrs. K. Vidhya, AP

Ms S.. Manonmani , AP

Ms. D. Vidhyalakshmi, AP

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