

## Introduction

Bioprocess engineering is a highly interdisciplinary field of study which is strongly benefited by practical courses where students can actively experience the interconnection between biology, engineering, and physical sciences. This course is designed as an integrated structure to give a broad overview on topics that govern both science and technology in bioprocess research and industries.

## Programme Objective

The main teaching concept which is pursued during the course is the involvement, and participation of the students, faculty and researchers in all activities related to the experiment. Participants will be challenged with a real-life bioprocess-engineering application, the production of biological products through the proper fermentation process.

## Salient features of the program

- Interactive hands-on sessions for in-depth knowledge sharing.
- Interaction with industrial experts working in related to Bioprocess technology.
- Guest lectures by academic experts working in bioproduct development and bioprocess engineering.
- Group and individual activities in bioprocess engineering.

## Delivery methods:

**65 % Hands on activity**

25 % Lecture

10 % Discussion/Tutorial/Group Activity

## Course content:

80 % Fundamentals and concepts

20 % Industrial applications

## Course Content & Tentative Schedule

Day	Session	Description
1	Theory	Academic expert presentation 1
	Hands on training- Getting to know Bioreactor	Industrial experts' demonstration for bioreactor design by Lark Innovative Fine Teknowledge,
2	Hands on training- Setting up the bioreactor	Complete setup of bioreactor, Reactor sterilization, Media preparation, Seed culture preparation, Shake flask studies.
3	Theory	Industrial expert presentation 1
	Hands on training- Operation of bioreactor	Measurement and control of parameters like pH, Temperature, DO, pO <sub>2</sub> , Biomass, OTR and OUR
4	Theory	Academic Expert presentation 2
	Hands on training- Operation of bioreactor	Bio dry mass, $\mu_{max}$ : maximum specific growth rate, $Y_{X/S}$ : substrate to biomass yield $k_{La}$ , $Y_{X/O_2}$ .
5	Theory	Industrial expert presentation 2
	Calculations, documentation and results of experiment.	Scale-up criteria, Downstream processing: What comes after fermentation? Product recovery and finishing

# A Five-Day National Workshop on Bioreactor Operation for Bioprocessing

**December 9-13, 2019**

## Coordinators

Dr.P.Hari Babu

Mr.M.Ranjith Kumar



*Organised by*

**Department of Biotechnology**

**ST. PETER'S COLLEGE OF  
ENGINEERING & TECHNOLOGY**

Affiliated to Anna University, Approved by AICTE,

ISO 9001: 2015 Certified

Avadi, Chennai-600 054

Ph: 044-26558089

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## About the Institution

St. Peter's College of Engineering and Technology, a co-educational college was established by Lakshmi Saraswathi Educational Trust in the year 2008. The college aims to impart training to students to develop their Intellectual powers, identify and cultivate interest and talents, and train them to become responsible and eminent citizens of India.

The college is located in a serene environment in Avadi. There are many industries in and around the college including one of the largest industrial estates in Ambattur. The College is easily commutable by bus and train. Annanur railway station, on the Chennai Central- Tiruvallur broad gauge section is just 1½ km. from our College. The College also runs busses from different parts of the students. Separate hostel facilities are available for boys and girls.

## About the Department of Biotechnology

The Department of Biotechnology at St. Peter's college of Engineering and Technology was founded in 2014-2015 with a vision to be recognized as a Department of International repute with a strong teaching in biological sciences and engineering. Right from its inception, the department has been offering well-built infrastructural facilities with different labs for grooming students to meet the persistent demands of the research industry. We also involve in various research projects in the fields of Environmental biotechnology, Bioprocess Engineering, Biopharmaceutical technology, Molecular Biology & Genetic Engineering and Nano-Biotechnology. These laboratories are facilitated with sophisticated instruments like HPLC, ELISA Reader, Double-beam UV-Vis Spectrophotometer, FT-IR, bioreactor, PCR, Fluorescence microscope and other instruments.

## Registration Fee:

Students & Research Scholars: Rs. 2500

Academicians: Rs. 3500

Professionals from Industry: Rs. 4000

The registration fee covers training fee, lunch and refreshments. Outstation can participants can request hostel for accommodation on payment basis. The registration fee may be sent by DD, payable at Avadi, in favour of The Principal, St.Peter's College of Engineering & Technology. Payment can be made online and proof of payment has to be sent along with registration form to the coordinator.

## Online payment details:

Bank name: INDIAN BANK

IFSC CODE: IDIB000S182

Account Name: R and D SPCET

Account Number: 875357239

## Accommodation

Accommodation can be arranged in the campus on prior notice, for which the participants will have to bear the charges and the participants are advised to send the request on or before 6th Dec, 2019 to ensure the accommodation.

## Dates to remember

Last date for online registration: 01.12.2019

Intimation of selection: 02.12.2019

Last date for registration with DD: 05.12.2019

Last date to request accommodation: 06.12 2019

## Registration Form

Registration form is available at

<https://forms.gle/ZeZYHtfkhFy9GytZ7>

Scan here to get to online registration form:



For further clarifications contact at:

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## Mailing addresses:

Coordinator

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