

## **BTP 459 BIOPROCESS TECHNOLOGY**

### **Course outcomes:**

*After successful completion of the course, students will be able to:*

- CO 1. Know about the instrumentation used in industrial biotechnology
- CO 2. Develop skills in techniques used in processing
- CO 3. Culture microorganisms of industrial importance in pilot scale
- CO 4. Develop skills in scaling up and industrial biotechnology

### **Isolation of microbes of industrial importance**

Instrumentation in bioprocess technology

Growth and death kinetics of microbial cultures

Cell encapsulation (immobilization) techniques and uses

Pilot-scale production of microbial (or plants or animal) cell products

Downstream processing techniques

Lyophilization Biosensors

