



## NTHRYS WORKSHOPS

# Advanced Techniques In Bioprocess Engineering

### 8:45 AM - 10:15 AM: Session 1: Metabolic Engineering

Introduction to metabolic engineering and its applications.  
Practical demonstration of metabolic pathway optimization for enhanced production.

### 10:15 AM - 10:30 AM: Coffee / Tea / Snacks Break

Networking and refreshments.

### 10:30 AM - 12:00 PM: Session 2: Process Analytical Technology (PAT)

Overview of PAT in bioprocessing.  
Hands-on workshop on implementing PAT tools for process monitoring and control.

### 12:00 PM - 1:00 PM: Lunch Break

Catered lunch and networking opportunity.

### 1:00 PM - 2:30 PM: Session 3: Scale-Up and Commercialization

Introduction to the principles of scale-up and commercialization.

Practical session on scaling up bioprocesses from lab to industrial scale.

### **2:30 PM - 2:45 PM: Short Break**

Time for a stretch and informal discussions.

### **2:45 PM - 4:15 PM: Session 4: Bioprocess Optimization and Control**

Discussion on bioprocess optimization and control strategies.

Case studies on optimizing bioprocess parameters for maximum yield and quality.

### **4:15 PM - 4:30 PM: Coffee / Tea / Snacks Break**

Last networking opportunity with snacks.

### **4:30 PM - 5:30 PM: Closing Session: Implementing Changes and Technology Adoption**

Group discussions on implementing new techniques learned today.

Dialogue on overcoming challenges in adopting new technologies in similar sectors.

Feedback session and closing remarks.

Certificate Issue

### **5:30 PM: Workshop Concludes**