



WPI

BIOMANUFACTURING EDUCATION & TRAINING CENTER

ENHANCE YOUR SKILLS & ADVANCE YOUR CAREER

Downstream Principles and Techniques

This four day training program provides an introduction to downstream processing and the major unit operations involved. Fifty five percent of this program is hands-on in the lab. This program was developed for those new to downstream processing who wish to gain hands-on experience and practice running NFF, TFF and Chromatography unit operations.

SCHEDULE:

Day 1

Lectures (4 hrs.)

- Biomanufacturing Process Overview (Vial to BDS)
- Cell Culture Process Overview
- Principles of Centrifugation
- Principles of Normal Flow Filtration

Labs (3 hrs.)

- Continuous Flow Centrifugation (disc stack)
- Filtration
- Filter Integrity Testing

Day 2

Lectures (3 hrs.)

- Quality Control Considerations
- Viruses (introduction, facility considerations and process controls)
- Virus Inactivation and Removal
- Chromatography Overview (principals, types, set up and load adjustments)

Labs (4 hrs.)

- Chromatography Column Operation (bench scale and pilot scale)

Day 3

Lectures (3 hrs.)

- Column Packing
- TFF

Labs (4 hrs.)

- Chromatography Column Operation (bench scale and pilot scale)
- Column assembly and packing

Day 4

Lectures (3 hrs.)

- TFF Principles and Applications
- Bulk Drug Bottling
- Introduction to Downstream Disposables and Processing

Labs (4 hrs.)

- TFF (UF/DF multiple stations)
- Final Filtration, BDS



Learn More: WPI.edu/+BETC

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