



WPI

BIOMANUFACTURING EDUCATION & TRAINING CENTER

ENHANCE YOUR SKILLS & ADVANCE YOUR CAREER

Upstream Processing of Animal Cell Culture Products

This intensive, five-day training program provides a critical overview of the animal cell culture process, the function of the equipment, and how that equipment is used within the process. Sixty percent of this program is hands-on in the lab. This program was developed to address the training needs of employees in the biotech industry with 0-5 years of experience or those who wish to expand their knowledge of cell culture processes.



SCHEDULE

Day 1

Lectures

- Fundamentals of mammalian cell based biomanufacturing
- Bioreactor controls and components
- Principles and practices of cell banking and cryopreservation
- Thaw and seed train expansions

Labs

- Bioreactor prep, set-up and SIP
- Vial thaws/suspension cells

Day 2

Lectures

- Quality control /Contamination and mycoplasma control
- Overview of media formulations

Labs

- Thaw adherent cells, Charge bioreactors with media
- Sample flasks/Automated and Manual cell counting/ inspect adherent cells/inoculate bioreactors

Day 3

Lecture

- Monoclonal antibody production and cell fusion
- Scale up strategies

Labs

- Bench top bioreactor sampling, batch trending and automation
- Bench top bioreactor sampling, metabolites, control systems

Day 4

Lecture

- Bioreactor controls, CIP

Labs

- Bench top bioreactor and flask sampling, manual counts, metabolites
- Pilot scale Bioreactor set up and prep
- CIP

Day 5

Lecture

- Centrifugation
- SIP

Labs

- Flask and bioreactor sampling
- Pilot scale bioreactor operation and troubleshooting
- Centrifugation
- Review/Open Question and answer/dashboard questions
- Assessments/Wrap up
- Review (2 hrs.)
- Program review / Q&A

Learn More: WPI.edu/+BETC

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