

**Biotech 2C: Manufacturing Technology: Cell Culture, Microbial
Fermentation**

<u>Topic</u>	<u>Typical Activity</u>
Overview of Cell Culture	Media preparations
Small Scale Cell Culture	Initiate cultures
Evaluation of Cultures Morphology/Confluency	Microscopic evaluation Cell enumeration/Viability
Sterility and Contamination Quality Control Testing	Subculture by division
Cryopreservation	Freeze cells for storage
Large Scale Media Prep	Preparation and filtration of media
Mammalian Fermentation	Bioreactor operation
Product Harvest	Cell removal by filtration
Fermentation of Recombinant <i>E. coli</i>	
Molecular Overview	Media Preparation
Microbial Media Design	Bacterial growth lab
Microbial Fermentation	OAR, pH, O.D., plasmid retention
Scale-up	Protein Expression/Induction