CENTRAL CAROLINA COMMUNITY COLLEGE

Applied Technologies

Program Planning Guide

Biotechnology - Bioprocess Quality Control, Certificate (C20100QC)

Program Length: 3 semesters
Program Sites: Lee Main Campus; Distance Education - some courses may be available online or hybrid
Career Pathway Options: Associate in Applied Science Degree in Biotechnology - Bioprocess Manufacturing Technology; Certificate in Bioprocess Quality Control

Suggested Course Schedule		Class	Lab	Work	Credits	Notes:
1st Semester (fall)						
BPM 110	Bioprocess Practices	3	4	0	5	BIOWORK
PTC 110	Industrial Environment	3	0	0	3	BIOWORK
	Total Semester Hours	6	4	0	8	
2nd Semester (spring)						
BPM 111	Bioprocess Measurements	3	3	0	4	
ISC 129	Qual Testing Lab Tech	2	2	0	3	
PTC 228	Biopharma Issues	1	0	0	1	
	Total Semester Hours	6	6	0	8	
Total Semester Hours Required for Graduation: 16						

Effective Term: 2025FA

Course Descriptions

ISC-129 Qual Testing Lab Tech Course
This course provides practical training in destructive and non-destructive testing techniques. Emphasis is placed on quality testing in industrial laboratories. Upon completion, students should be able to perform basic laboratory testing functions and complete test forms.

BPM 110 Bioprocess Practices
This course provides a study of plant operations including various plant utility systems and detailed study of the varied plant environments in a bioprocessing facility. Emphasis is placed on quality mindset and principles of validation through applications of monitoring procedures. Upon completion, students should be able to demonstrate the rigors of industry regulation and its necessity.

BPM 111 Bioprocess Measurements
Prerequisites: Take BPM 110
This course covers a variety of physical measurements. Emphasis is placed on pH, temperature, pressure and flow rates, as well as spectrophotometry, and biochemical and chemical analysis methods. Upon completion, students should be able to demonstrate and perform many aspects of process monitoring.

PTC 110 Industrial Environment
This course introduces the pharmaceutical industry, including a broad overview of work in this field. Emphasis is placed on good manufacturing practices (GMP), work conduct, company organization, job expectations, personal safety, hygiene, and company rules and regulations. Upon completion, students should be able to follow good manufacturing practice regulations and inspect a pharmaceutical manufacturing facility for compliance with GMP.