

PROGRAM PLANNING GUIDE

BIOTECHNOLOGY  
C20100R: BioMechatronics

Effective: Fall 2026

CURRICULUM BY SEMESTER					
			Hours Per Week		
Course No.		Course Title	Class	Lab	Credits
Semester 1					
BPM	110	Bioprocess Practices	3	4	5
HYD	180*	Fluid Power in Automation	2	3	3
ISC	121	Environmental Health & Safety	3	0	3
Semester 2					
ATR	115*	Intro to Mechatronics	3	3	4
ISC	278	cGMP Quality Systems	2	0	2
Graduation Requirement Credit Hours:					17

**Required Prerequisites:**

\* HYD-180 is essential preparation for ATR-115.

HYD-180 provides foundational knowledge of hydraulic and pneumatic systems—including symbols, components, control circuits, actuators, and troubleshooting—that is directly applied in ATR-115.

Mastery of these concepts ensures students are prepared to understand and succeed in the hydraulic, pneumatic, and electromechanical topics covered in Introduction to Mechatronics.

Certificate Description: This certification provides instruction on maintenance procedures and equipment control. Emphasis is placed on cGMP, OSHA regulation, and manufacturing processes applicable to the biopharmaceutical industry.