Student Name: Date:

## THE UNIVERSITY OF HAWAI'I - KAPI'OLANI COMMUNITY COLLEGE

## **CERTIFICATE OF ACHIEVEMENT IN BIOTECHNOLOGY**

**Effective Fall 2023** 

A grade of "C" or higher must be earned in all courses required for this certificate.

## 42 Semester Credits Total

SEMESTER ONE (15 Credits)		COURSE	CR	GR
ENG 100 or ESL 100 (Composition I) See KapCC Catalog for prerequisites. check boxes if transfer course				
MATH 135 (Precalculus: Elementary Functions) Prereq(s): "C" or higher in MATH 103 or appropriate placement score.				
CHEM 161 (General Chemistry I) Prereq(s): "C" or higher in MATH 103. Recommended preparation: MATH 135.				
CHEM 161L (General Chemistry I Lab) Prereq(s): "C" or higher in MATH 103 and credit or concurrent enrollment in CHEM 161. Recommended preparation: MATH 135.				
MICR 130 (General Microbiology) Recommended preparation: MATH 82 or equivalent course; and CHEM 100 or CHEM 151 or CHEM 161 or BIOC 141	1.			
MICR 140 (General Microbiology Lab) Prereq(s): "C" or higher or concurrent enrollment in MICR 130 or consent of instructor. Recommended: MATH 82				
SEMESTER TWO (10 Credits)		COURSE	CR	GR
CHEM 162 (General Chemistry II) Prereq(s): "C" or higher in CHEM 161; and "C" or higher in MATH 103. Recommended preparation: MATH 135.				
CHEM 162L (General Chemistry II Lab) Prereq(s): "C" or higher in CHEM 161 and "C" or higher in CHEM 161L and credit or concurrent enrollment in CHEM 162 and "C" or higher in MATH 103. Recommended preparation: MATH 135.				
BIOL 171 (Introduction to Biology I) Prereq(s): "C" or higher or concurrent enrollment in CHEM 161. See KapCC Catalog for recommended preparation. It is strongly recommended to take BIOL 171L concurrently with BIOL 171.				
BIOL 171L (Introduction to Biology I Lab) Prereq(s): Credit or concurrent enrollment in BIOL 171.				
MICR 161 (Immunology and Protein Chemisty) See KapCC Catalog for prerequisites. Prerequisites may be waived by the consent of instructor.				
SEMESTER THREE (9 Credits)		COURSE	CR	GR
CHEM 272 (Organic Chemisty I) Prereq(s): "C" or higher in CHEM 162.				
CHEM 272L (Organic Chemistry Lab I) Prereq(s): "C" or higher in CHEM 162L and credit or concurrent enrollment in CHEM 272.				
BIOL 172 (Introduction to Biology II) Prereq(s): "C" or higher in BIOL 171 or consent of instructor.				
BIOL 172L (Introduction to Biology II Lab) Prereq(s): Credit or concurrent enrollment in BIOL 172.				
SEMESTER FOUR (8 Credits)		COURSE	CR	GR
BIOL 275 (Cell and Molecular Biology) See KapCC Catalog for prerequisites and recommended preparation.				
BIOL 275L (Cell and Molecular Biology Lab) or MICR 240 (Cell Biology and Tissue Culture) See KapCC Catalog for prerequisites.				
MICR 230 (Molecular Biology) See KapCC Catalog for prerequisites.				
SCI 295MI (STEM Research Experience in Microbiology and/or Molecular Biology) Prereq(s): Instructor consent. See KapCC Catalog for recommended preparation.				

Revised 08.15.23