

CELL CULTURE TECHNIQUES AND APPLICATIONS CERTIFICATE

The Certificate Program in Cell Culture Techniques and Applications aims at training students in foundational mammalian cell culture skills and its applications in different fields. This program is comprised of four courses: an introductory course, Bio 313 (Cell Culture Methods), one upper level elective, and Bio 393 (Integrated Applications of Cell Culture Techniques). This program aims to bridge the gap between graduation and employment/advancement of student careers.

Course	Title	Quarter Hours
Required Courses:		
BIO 313	CELL CULTURE METHODS	4
BIO 393	INTEGRATED APPLICATIONS OF CELL CULTURE TECHNIQUES	2
Sophomore - level prerequisite ^{1, 2, 3}		0-4
BIO 210	MICROBIOLOGY	
BIO 220	BIOTECHNOLOGY	
BIO 250	CELL BIOLOGY	
BIO 260	GENETICS	
Electives: Choose one of the following		4
BIO 320	ADVANCED MICROBIOLOGY	
BIO 339	CELLULAR NEUROBIOLOGY	
NEU 339	CELLULAR NEUROBIOLOGY	
BIO 347	TOPICS IN MEDICAL BACTERIOLOGY	
BIO 349	TOPICS IN MICROBIOLOGY AND BIOTECHNOLOGY	
BIO 360	MOLECULAR BIOLOGY	
BIO 370	IMMUNOBIOLOGY	
BIO 380	CANCER BIOLOGY	
BIO 381	TOPICS IN CANCER	
BIO 385	MAMMALIAN REPRODUCTION	
BIO 386	ENDOCRINOLOGY	
BIO 399	INDEPENDENT STUDY - RESEARCH	
Total Hours		10-14

¹ This pre-requisite is waived if all four of the sophomore level courses have been completed.

² If a student chooses to take a 300-level elective for which the necessary pre-requisite Introductory course has not been taken, then the student will need to take an Introductory course to satisfy this requirement.

³ For transfer or post-baccalaureate students, waiver of the Introductory course taken elsewhere will be handled on a case-by-case basis.