

BACHELOR of SCIENCE (B.S.) in BIOLOGY (2023-2024)
BBTE -- Biotechnology Emphasis

Four-Year Degree Plan

WRITING INTENSIVE PROGRAM: Students must complete a combined total of 9 credit hours of Writing Enriched (WE) and Writing in the Discipline (WD) coursework. One course must be a WD course (of any number of credits) and can be BIO 4700 or any other WD course. BIO 3710 (see page 2) will count as 4 WE hours, so you will need at least 2 more hours of WE or WD coursework, which can come from any discipline. Double majors need only fulfill the Writing Intensive Program requirement once. It is recommended that you “double dip” by taking a Biology elective or General Education Requirement that is also designated as WE. NOTE: Successful completion (grade of “C” or better) of ENG 1050 is a prerequisite for all WE or WD courses.

INDIGENOUS CULTURES AND COMMUNITIES (ICC): Students entering the university in Fall 2023 or later shall complete the ICC requirement for graduation. Students may satisfy this requirement by completing two 3-credit hour ICC-designated courses. Students who transfer over 60 or more hours shall complete one 3-credit hour ICC course. Designated ICC courses can satisfy other graduation requirements such as General Education and/or Writing Intensive Program requirements (see above); it is possible to “double dip” or even “triple dip” (e.g., MUS 1210 may satisfy a Fine Arts, WE, and ICC requirement).

*****ALL GENERAL EDUCATION COURSES CAN BE INTERCHANGED*****

C or higher is required in BIO 1000 to matriculate to other BIO courses in the major

*Count towards 44 hours of General Education

****Biotechnology Emphasis Electives:** BIO 3200, 3750, 3810, 4130, BTEC 4300, BTES 4xxx, CHM 2500&2520, 2270, 3110&3120, PHY 1500&1560, 1510&1570

QPA Requirements for Baccalaureate Graduation: “Have a minimum overall cumulative quality point average of 2.0 and have a minimum cumulative quality point average of 2.0 in all work attempted at the University of North Carolina at Pembroke; Have a minimum overall cumulative quality point average of 2.0 in the major field of study.” Note: QPA cannot be rounded up (e.g., a QPA of 1.996 is not sufficient for graduation).

Freshman Year							
Fall				Spring			
	Course Number	Course Title	Credits		Course Number	Course Title	Credits
	UNV 1000	Freshman Seminar	1		ENG 1060*	Composition II	3
	ENG 1050*	Composition I	3		CHM 1300*	General Chemistry	3
	BIO 1000*	Principles of Biology	3		CHM 1100	General Chemistry Laboratory I	1
	BIOL 1000	Laboratory Investigations and Experiences in General Biology	1		MAT 1070* or MAT 1090*	College Algebra or Precalculus	3 or 4
	General Education	Social Science	3		General Education	Elective	3
	University Wide Elective		3		University Wide Elective		3
	General Education	Physical Education	1				
Total Credits			15	Total Credits			16-17

Sophomore Year						
Fall				Spring		
Course Number	Course Title	Credits		Course Number	Course Title	Credits
BIO 1010 or BIO 1020	General Botany or General Zoology	4		MAT 2100*	Introduction to Statistics	3
CHM 1310	General Chemistry II	3		BIO 1010 or BIO 1020	General Botany or General Zoology	4
CHM 1110	General Chemistry Laboratory II	1		Biotech Emphasis Elective**		1-4
Biotech Emphasis Elective**		1-4		General Education	Social Science	3
General Education	Literature	3		University Wide Elective		3
University Wide Elective		3		General Education	Physical Education	1
Total Credits		15-18		Total Credits		15-18

Junior Year						
Fall				Spring		
Course Number	Course Title	Credits		Course Number	Course Title	Credits
MAT 2150 or MAT 2210	Calculus with applications or Calculus I	4		BIO 3180	Principles of Genetics	4
BIO 3040	Principles of Ecology	4		MAT 2220	Calculus II	4
BTEC 3220 (<i>Fall Odd years only</i>)	Biotechnology I	4		BIO 3150	Microbiology	4
University Wide Elective		3		BTEC 3510 or BTEC 4300 or BIO 4130 (<i>Spring Only?</i>)	Bioprocessing or Principles of Medical Biotechnology or Molecular Biology	3-4
Total Credits		15		Total Credits		15-16

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Senior Year						
Fall				Spring		
Course Number	Course Title	Credits		Course Number	Course Title	Credits
BIO 3710 (WE)	Cell Biology	4		BTEC 4900 <i>Taken in last summer</i>	Internship	3
BIO 4700 (WD)	Reading and Writing in the Natural Sciences	3		Biotech Emphasis Elective**		3-4
Biotech Emphasis Elective**		1-4		General Education	Fine Arts	3
General Education	Philosophy and Religion	3		General Education	History	3
General Education	Social Science	3		University Wide Elective		3
Total Credits		14-17		Total Credits		15-16