

Bachelor of Science (B.S.) in Biology (2023-2024) **BAGS – Agricultural Science 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. The WE coursework 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).

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

****Approved Agricultural Science Electives (Arranged by Areas of Interest):**

Students may take any of the courses from the list below, but we recommend that students consider adopting one of the Areas of Interest outlined below and take elective courses accordingly. Additionally, relevant BIOS courses (BIOS 3055- Tropical Horticulture, BIOS 3012- Small Fruit and Berry Production, BIOS xxxx- Ruminant Production can be substituted and count toward the degree electives.

- **Area of interest – Animal Husbandry**
BIO 3190 Animal Parasitology (4), BIO 2410 Principles of Animal Nutrition (3), BTEC 4300 Principles of Medical Biotechnology (3), BIO 2060 Animal Reproductive Physiology (4)
 - **Area of interest – Plant Cropping**
BIO 3540 Plant Physiology (4), BIO 3010 Entomology (4), BIO 2010 Techniques in Horticulture (4)
 - **Area of interest – Niche Farming**
BIO 2080 Introductory Mycology (3), BIO 2420 Beekeeping (3), BIO 3020 Greenhouse Management (4)
 - **Area of interest – Food Systems**
ENV 4100 Environmental Laws and Regulations (3) OR ECN 3080 Environmental Economics (3) [prereq. ECN 2020 (Gen. Ed.)]
 - **Area of interest – Sustainable Agriculture**
BIO 3420 Pollution Ecology (3), BIO 4320 Conservation Biology (4), BIO 4510 Small Farming Systems (4), ENV 3100 Freshwater Ecosystems and Watershed Management (4)
- Area of interest – Agricultural Technology**
GGY 2700 Intro to Geographic Information Science (4), GGY 4040 Remote Sensing (3),
GLY 2460 Weather and Climate (3), GLY 2620 Environmental Geology (3)

ALL GENERAL EDUCATION COURSES CAN BE INTERCHANGED

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		BIO 1010 or BIO 1020	General Botany or General Zoology	4
MAT 1070 or MAT 1090	College Algebra or Precalculus	3 or 4		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		BIO 2010 (this is an elective course – see Plant Cropping electives)	Techniques in Horticulture	4
BIO 1040 (odd years only) (OR General Education)	Introduction to Animal Science (OR Fine Arts)	3 (3)		(OR General Education)	(OR Fine Arts & Physical Education)	(3) (1)
Total Credits		14-15		Total Credits		15

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		ENV 2450 (spring of odd years only)	Principles of Sustainable Agriculture	4
CHM 1110	General Chemistry Laboratory II	1		General Education	Literature	3
Agricultural Science Elective**		3-4		ENV 3200 (spring of odd years only)	Soils and Hydrology	4
General Education	History	3		University Wide Electives ***		3
Total Credits		14-15		Total Credits		15

Junior Year						
Fall				Spring		
Course Number	Course Title	Credits		Course Number	Course Title	Credits
BIO 3180	Principles of Genetics	4		ENV 3250 (spring of even years only)	Plant Cropping and Weed Management	3
Agricultural Science Elective**		3-4		BIO 3040	Principles of Ecology	4
Agricultural Science Elective**		3-4		University Wide Electives ***		3
General Education	Social Science	3		General Education	Elective	3
General Education	Physical Education	1		General Education	Philosophy and Religion	3
Total Credits		15-16		Total Credits		15-16

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Senior Year							
Fall				Spring			
	Course Number	Course Title	Credits		Course Number	Course Title	Credits
	ENV 4200 (fall of even years only)	Pest Management	4		BIO 4700 (WD)		3
	BIO 4010	Agriculture Internship	3		General Education	Social Science	3
	General Education	Social Science	3		University Wide Electives***		3
	University Wide Electives***		3		University Wide Electives***		3
	University Wide Electives***		3		University Wide Electives***		3
Total Credits			16	Total Credits			15

**Approved Agricultural Science Electives

*** Students with an interest in entrepreneurship or small business are encouraged to use some of their university electives to obtain an Entrepreneurship Certificate. The following courses are required for this certificate: ENTR 2000, ENTR 2100, ENTR 4000