SBIO Bachelor of Science in Science Education (9-12) Biology Concentration

INDIGENOUS CULTURES and COMMUNITIES (ICC) Students entering the University in Fall 2022 or later, as a requirement for graduation, shall complete the ICC Requirement. Students may satisfy this requirement by completing two 3-credit hour approved ICC designated courses OR one 3-credit hour approved ICC designated course and an ICC designated and department approved co-curricular learning experience. Transfer students with over 60 hours will be required to complete one course or the approved departmental experiential learning experience. Designated ICC courses and experiences can satisfy other graduation and general education graduation requirements and need not increase the total number of hours required for graduation.

The Writing Intensive Program The goal of the program is to enhance the ability of students to write effectively and appropriately in both general writing and professional writing in their disciplines. The program consists of Writing Enriched courses and Writing in the Discipline courses. Students must complete nine semester credit hours of Writing Enriched and Writing in the Discipline courses. One course must be a Writing in the Discipline course.

the Discipline courses. Or	e course must be a Writing in		e course.
Freshman Seminar/Gener		45(33)	Twelve hours of natural sciences and mathematics may count toward general education requirements
	UNV 1000	1	Freshman Seminar Students transferring in more than 15 credit hours are exempt.
Communication Skills		6 hours	total
	ENG 1050	3	Composition I
	ENG 1060	3	Composition II
Arts & Humanities		12 hours	total Choose one course from each of the 4 areas
	Fine Arts	3	ART 1450, 2050, 2080, 2090, MUS 1020, 1040, 2940, 2980, THE 2500
	Literature	3	ENG 2010,2020,2030,2050,2060, 2080, 2090, 2100, 2180, 2190, 2230, 2240, 2410, 2470, 2480, AIS 2200
	History	3	HIS 1010,1020,1030,1100,1110,1140,1150,AIS 1100, AIS1110
	Philosophy/Religion	3	PHI 1000, 1010, 2040, 2070,REL 1080, 1300
Social Sciences			total Choose one course from each of 3 out of these 5 areas Economics ECN 1000, 2020, 2030, 2410 Geography
Social Sciences		GGY 101	0, 1020, 2000, 2060, Political Science PLS 1000, 1010, Psychology PSY 1010, Sociology SOC 1020, 1050, 2090
		3	
		3	
		3	
General Education Elective			Any additional course from the Arts & Humanities Division or Social Science Division as listed in the General
General Education Lieu	ive		Education Requirements section of the current UNCP Academic Catalog.
		3	
Physical Education		2 hours	total Choose from PED 1010, 1300, 1310, 1320, 1330, 1340, 1350, 1360, 1370, 1380, 1390, 1410, 1450, 1460, 1770,
i nysicai Education			1790, 1800 (MSC), 1810(THE), 1820(THE), 1900,1910, 1950
	PED 1	1	
	PED 1	1	
Professional Education Requirements*		12 hours	total
	EDN 2100	3	Introduction to Education (Required for admission to the Teacher Education Program. Prerequisites: 30 semesters
	LDIVETOO		hours and a GPA of 2.7 or better)
	SED 3310	3	Introduction to the Exceptional Child
	EDN 3140	3	Aspects of Human Development and Educational Psychology for Grades 6-12
	LBITOTIO		Content Area Literacy (Must be admitted to the Teacher Education Program to take this class. A GPA of 2.7 or better
	EDN 3130	3	and passing Praxis scores are required to be admitted to the Teacher Education Program)
Essential Standards *		57 hours	total Biology (9-12) Concentration
	BIO 1000	3	Principles of Biology
	BIO 1000L	1	Principles of Biology Lab
	BIO 1010	4	General Botany and General Botany Lab (must sign up for both at same time)
	BIO 1020	4	General Zoology and General Zoology Lab (must sign up for both at same time)
	BIO 3040	4	Principles of Ecology and Principles of Ecology Lab (must sign up for both at same time)
	BIO 2180	4	Principles of Genetics and Principles of Genetics Lab (must sign up for both at same time)
	BIO 3710	4	Cell Biology and Cell Biology Lab (must sign up for both at same time)
	BIO 4220	3	Evolution
Salact one (minimum of 2	DIO 4220	3	Evolution
Select one (IIIIIIIIIIIII 01 3			metrics BIO 4310; Research in Biology BIO 4990; or BIOS 3xxx Special Topics in Biology
Selectione (Illillilling) 3			
Gelect one fullillilling 01.3	hours): Research Strategies I	BIO 3510; Bio	
Select one (Illillillillillill)	hours): Research Strategies E BIO 3510		
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Selectionia (Illininini)	hours): Research Strategies B BIO 3510 BIO 4310 BIO 4990	3-4	metrics BIO 4310; Research in Biology BIO 4990; or BIOS 3xxx Special Topics in Biology
Select One (IIIIIIIIIIII Of 3	hours): Research Strategies E BIO 3510 BIO 4310 BIO 4990 BIOS 3xxx MAT 1070 or	BIO 3510; Bio	metrics BIO 4310; Research in Biology BIO 4990; or BIOS 3xxx Special Topics in Biology College Algebra or
Select One (IIIIIIIIIIII Of 3	hours): Research Strategies B BIO 3510 BIO 4310 BIO 4990 BIOS 3xxx MAT 1070 or MAT 1090	3-4 3-4	metrics BIO 4310; Research in Biology BIO 4990; or BIOS 3xxx Special Topics in Biology College Algebra or Pre-calculus
Select One (IIIIIIIIIIII Of 3	hours): Research Strategies E BIO 3510 BIO 4310 BIO 4990 BIOS 3xxx MAT 1070 or MAT 1090 CHM 1300	3-4 3-4 3-4 3-4	metrics BIO 4310; Research in Biology BIO 4990; or BIOS 3xxx Special Topics in Biology College Algebra or Pre-calculus General Chemistry I PHY 1560 3 College Physics II
Select One (IIIIIIIIIIII Of 3	hours): Research Strategies E BIO 3510 BIO 4310 BIO 4990 BIOS 3xxx MAT 1070 or MAT 1090 CHM 1300 CHM 1100	3-4 3-4 3-1	metrics BIO 4310; Research in Biology BIO 4990; or BIOS 3xxx Special Topics in Biology College Algebra or Pre-calculus General Chemistry I PHY 1560 3 College Physics II General Chemistry I Lab PHY 1570 1 College Physics II Lab
Select One (IIIIIIIIIIII Of 3	hours): Research Strategies B BIO 3510 BIO 4310 BIO 4990 BIOS 3xxx MAT 1070 or MAT 1090 CHM 1300 CHM 1100 CHM 1310	3-4 3-4 3-4 3-4 3-4 3 1	metrics BIO 4310; Research in Biology BIO 4990; or BIOS 3xxx Special Topics in Biology College Algebra or Pre-calculus General Chemistry I PHY 1560 3 College Physics II General Chemistry I Lab PHY 1570 1 College Physics II Lab General Chemistry II GLY 1150 3 Earth Science
Select One (IIIIIIIIIIII Of 3	hours): Research Strategies BIO 3510 BIO 3510 BIO 4310 BIO 4990 BIOS 3xxx MAT 1070 or MAT 1090 CHM 1300 CHM 1100 CHM 1310 CHM1110	3-4 3-4 3-4 3-1	Metrics BIO 4310; Research in Biology BIO 4990; or BIOS 3xxx Special Topics in Biology
Select One (IIIIIIIIIIII Of 3	hours): Research Strategies B BIO 3510 BIO 4310 BIO 4990 BIOS 3xxx MAT 1070 or MAT 1090 CHM 1300 CHM 1100 CHM 1310 CHM1110 PHY 1500	3-4 3-4 3-4 3-1 3 1	Metrics BIO 4310; Research in Biology BIO 4990; or BIOS 3xxx Special Topics in Biology
	hours): Research Strategies BIO 3510 BIO 3510 BIO 4310 BIO 4990 BIOS 3xxx MAT 1070 or MAT 1090 CHM 1300 CHM 1100 CHM 1310 CHM1110	3-4 3-4 3-4 3-1 3-1	College Algebra or
Content Pedagogy*	hours): Research Strategies BIO 3510 BIO 3510 BIO 4310 BIO 4990 BIOS 3xxx MAT 1070 or MAT 1090 CHM 1300 CHM 1100 CHM 1310 CHM1110 PHY 1500 PHY 1560	3-4 3-4 3-4 3-1 3 1 3 1 8 1 18 hours	metrics BIO 4310; Research in Biology BIO 4990; or BIOS 3xxx Special Topics in Biology College Algebra or Pre-calculus General Chemistry I PHY 1560 3 College Physics II General Chemistry I Lab PHY 1570 1 College Physics II Lab General Chemistry II GLY 1150 3 Earth Science General Chemistry II Lab GLY 1150L 1 Earth Science Lab College Physics I GLY 1250 3 Earth History College Physics I Lab GLY 1250L 1 Earth History Lab
	hours): Research Strategies BIO 3510 BIO 3510 BIO 4310 BIO 4990 BIOS 3xxx MAT 1070 or MAT 1090 CHM 1300 CHM 1100 CHM 1310 CHM1110 PHY 1500 PHY 1560 SCE 3000	3-4 3-4 3-4 3-4 3-4 3-1 3-1 18 hours	metrics BIO 4310; Research in Biology BIO 4990; or BIOS 3xxx Special Topics in Biology College Algebra or Pre-calculus General Chemistry I PHY 1560 3 College Physics II General Chemistry I Lab PHY 1570 1 College Physics II Lab General Chemistry II GLY 1150 3 Earth Science General Chemistry II Lab GLY 1150 1 Earth Science General Chemistry II Lab GLY 1250 3 Earth History College Physics I Lab GLY 1250 1 Earth History College Physics I Lab GLY 1250L 1 Earth History Lab
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	hours): Research Strategies B BIO 3510 BIO 3510 BIO 4310 BIO 4990 BIOS 3xxx MAT 1070 or MAT 1090 CHM 1300 CHM 1100 CHM 1310 CHM1110 PHY 1500 PHY 1560 SCE 3000 SCE 3010 SCE 4000	3-4 3-4 3-4 3-1 3-1 18 hours 1 2 3	metrics BIO 4310; Research in Biology BIO 4990; or BIOS 3xxx Special Topics in Biology College Algebra or Pre-calculus General Chemistry I PHY 1560 3 College Physics II General Chemistry I Lab PHY 1570 1 College Physics II Lab General Chemistry II GLY 1150 3 Earth Science General Chemistry II Lab GLY1150L 1 Earth Science Lab College Physics I GLY 1250 3 Earth History College Physics I Lab GLY 1250L 1 Earth History total Early Experiences for Prospective Science Teacher Early Laboratory Experiences for Prospective Science Teacher Teaching of Science in the Secondary School
	hours): Research Strategies BIO 3510 BIO 3510 BIO 4310 BIO 4990 BIOS 3xxx MAT 1070 or MAT 1090 CHM 1300 CHM 1100 CHM 1310 CHM1110 PHY 1500 PHY 1560 SCE 3000 SCE 3010	3-4 3-4 3-4 3-4 3-4 3-1 18 hours 1 2	metrics BIO 4310; Research in Biology BIO 4990; or BIOS 3xxx Special Topics in Biology College Algebra or Pre-calculus General Chemistry I PHY 1560 3 College Physics II General Chemistry I Lab PHY 1570 1 College Physics II Lab General Chemistry II GLY 1150 3 Earth Science General Chemistry II Lab GLY1150L 1 Earth Science Lab College Physics I GLY 1250 3 Earth History College Physics I Lab GLY 1250L 1 Earth History College Physics I Lab GLY 1250L 1 Earth History Lab Etotal Early Experiences for Prospective Science Teacher Early Laboratory Experiences for Prospective Science Teacher

^{*}Science Education Majors must earn a "C-" or better in all courses listed under the indicated sections. A grade of "C" or better must be earned in repeated courses.

^{***}These are the only courses that can be taken during the Professional Semester. The Professional Semester is the final semester.