# **Zoology (BS)**

The Bachelor of Science in Zoology curriculum concentrates on organismal biology, with an emphasis on animals. Required courses are designed to develop breadth and depth in core areas, providing a strong base for all Zoology majors. Students acquire a knowledge of zoology from the organizational level of molecules and cells to the organizational level of ecosystems, with flexibility in the selection of upper level courses to specialize or remain generalized, according to individual interests and career goals.

## **Plan Requirements**

Code	Title	Hours	Counts towards				
Exploring the Lif	Exploring the Life Sciences						
LSC 103	Exploring Opportunities in the Life Sciences	1					
Communication							
Advanced Writing Elective (p. 2) 1	Requirement	3					
Math & Statistica	al Sciences						
MA 131	Calculus for Life and Management Sciences A <sup>1</sup>	3					
or MA 141	Calculus I						
MA 231	Calculus for Life and Management Sciences B <sup>1</sup>	3					
or MA 241	Calculus II						
ST 311	Introduction to Statistics <sup>1</sup>	3					
or ST 371	Introduction to Probability and Distribution Theory	d					
Natural Sciences	S						
LSC 101	Critical and Creative Thinking in the Life Sciences 1	2					
BIO 181	Introductory Biology: Ecology, Evolution, and Biodiversity <sup>1</sup>	4					
BIO 183	Introductory Biology: Cellular and Molecular Biology <sup>1</sup>	4					
ZO 250	Animal Anatomy and Physiology <sup>1</sup>	4					
AEC 360 or PB 360	Ecology <sup>1</sup> Ecology	4					
CH 101	Chemistry - A Molecular Science <sup>1</sup>	3					
CH 102	General Chemistry Laboratory <sup>1</sup>	1					

CH 201	Chemistry - A Quantitative Science <sup>1</sup>	3
CH 202	Quantitative Chemistry Laboratory <sup>1</sup>	1
CH 221	Organic Chemistry I <sup>1</sup>	3
CH 222	Organic Chemistry I Lab <sup>1</sup>	1
CH 223	Organic Chemistry II <sup>1</sup>	3
CH 224	Organic Chemistry II Lab	1
GN 311	Principles of Genetics <sup>1</sup>	4
Select one of the	following: 1	4
PY 201	University Physics I	
PY 205 & PY 206	Physics for Engineers and Scientists I and Physics for Engineers and Scientists I Laboratory	
PY 211	College Physics I	
Select one of the	following: 1	4
PY 202	University Physics II	
PY 208 & PY 209	Physics for Engineers and Scientists II and Physics for Engineers and Scientists II Laboratory	
PY 212	College Physics II	
<b>Major Electives</b>		
ZO 350	Animal Phylogeny and Diversity <sup>1</sup>	4
or ZO 402	Invertebrate Biology	
Zoology Electives	(p. 2) <sup>1</sup>	12
Additional Science (p. 3)	e & Math Electives	9
GEP Courses		
ENG 101	Academic Writing and Research <sup>1</sup>	4
GEP Humanities catalog.ncsu.edu/gep-category-req humanities/)	undergraduate/	6

Total Hours	120	
Free Electives (12 Hr S/U Lmt)	12	
Free Electives		
Foreign Language Proficiency (verify requirement)		
GEP Global Knowledge (http:// catalog.ncsu.edu/undergraduate/ gep-category-requirements/ gep-global-knowledge/) (verify requirement)		
GEP Interdisciplinary Perspectives (http://catalog.ncsu.edu/ undergraduate/gep-category- requirements/gep-interdisciplinary- perspectives/)	3	
GEP Elective (http:// catalog.ncsu.edu/undergraduate/ gep-category-requirements/)	3	
GEP Health and Exercise Studies (http://catalog.ncsu.edu/ undergraduate/gep-category- requirements/gep-health-exercise- studies/)	2	
GEP Social Sciences (http:// catalog.ncsu.edu/undergraduate/ gep-category-requirements/gep- social-sciences/)	6	

<sup>&</sup>lt;sup>1</sup> A grade of C- or higher is required.

## **Advanced Writing Requirement Electives**

Code	Title	Hours	Counts towards
BIO 267	Research in the Life Sciences I: Research Skills	3	
COM 211	Argumentation and Advocacy	3	
ENG 214	Introduction to Editing	3	
ENG 232	Literature and Medicine	3	
ENG 287	Explorations in Creative Writing	3	
ENG 288	Fiction Writing	3	
ENG 289	Poetry Writing	3	
ENG 292	Writing About Film	3	
ENG 316	Introduction to News and Article Writing	3	
ENG 323	Writing in Rhetorical Traditions	3	
ENG 331	Communication for Engineering and Technology	3	

ENG 332	Communication for Business and Management	3
ENG 333	Communication for Science and Research	3
ENG 381	Creative Nonfiction Writing Workshop	3
ENG 388	Intermediate Fiction Writing Workshop	3
ENG 389	Intermediate Poetry Writing Workshop	3
ENG 416	Advanced News and Article Writing	3
ENG 417	Editorial and Opinion Writing	3
ENG 422	Writing Theory and the Writing Process	3
ENG 425	Analysis of Scientific and Technical Writing	3
ENG 426	Analyzing Style	3

## **Zoology Electives**

Code	Title	Hours	Counts towards
AEC 380	Water Resources: Global Issues in Ecology, Policy, Management, and Advocacy	3	
AEC 384	Tropical Ecology in a Changing World	3	
AEC 390	Community Ecology	3	
AEC 400	Applied Ecology	3	
AEC 419	Freshwater Ecology	4	
AEC 441	Biology of Fishes	3	
AEC 442	Biology of Fishes Laboratory	1	
AEC 460	Field Ecology and Methods	4	
AEC 470	Urban Ecology	3	
AEC 501	Avian Ecology	4	
AEC 509	Ecology and Conservation of Freshwater Invertebrates	3	
AEC 515	Fish Physiology	3	

AEC 519	Freshwater Ecology	4
AEC 761	Conservation and Climate Science	3
BIO 270	Introduction to Evolution	3
BIO 315	General Parasitology	3
BIO 323	Paleoecology	3
BIO 330	Evolutionary Biology	3
BIO 361	Developmental Biology	3
BIO 370	Developmental Anatomy of the Vertebrates	3
BIO 375	Developmental Anatomy Laboratory	2
BIO 444	The Biology of Love and Sex	3
BIO 555	Creative Media Production for Scientists	3
BSC 492	Professional Experience	1-3
BSC 493	Research Experience	1-3
BSC 494	Teaching Experience	1-3
BSC 497	Biological Sciences Honors Project Part 1	3
BSC 498	Biological Sciences Honors Project Part 2	3
ENT 402	Forest Entomology	3
ENT 425	General Entomology	3
ENT 509	Ecology and Conservation of Freshwater Invertebrates	3
ENT 582	Medical and Veterinary Entomology	3
FOR 402	Forest Entomology	3
FW 444	Mammalogy	3
FW 515	Fish Physiology	3
FW 544	Mammalogy	3
MB 435	Bacterial Pathogenesis	3

MB 470	Emerging and Re-emerging Infectious Diseases	3
MB 535	Bacterial Pathogenesis	3
MEA 220	Marine Biology	3
PHY 524	Comparative Endocrinology	3
PO 524	Comparative Endocrinology	3
ZO 317	Primate Ecology and Evolution	3
ZO 333	Captive Animal Biology	3
ZO 410	Introduction to Animal Behavior	3
ZO 486	Capstone Course in Zoology	3
ZO 582	Medical and Veterinary Entomology	3

## **Additional Science & Math Electives**

Code	Title	Hours	Counts towards			
Science and Math						
AEC 245	Global Conservation Ecology	3				
AEC 384	Tropical Ecology in a Changing World	3				
AEC 390	Community Ecology	3				
AEC 400	Applied Ecology	3				
AEC 419	Freshwater Ecology	4				
AEC 424	Marine Fisheries Ecology	3				
BIO 323	Paleoecology	3				
AEC 441	Biology of Fishes	3				
AEC 442	Biology of Fishes Laboratory	1				
AEC 450	Conservation Genetics	3				
AEC 458	Environmental Issues in Aquatic Ecology	3				
AEC 460	Field Ecology and Methods	4				
AEC 470	Urban Ecology	3				
AEC 480	Applied Science Communication	3				

& ANS 221 Physiolog and	Reproductive Physiology and	ology	BCH 220	Role of Biotechnology in Society	3
	Reproductive Physiology Lab		BCH 351	General Biochemistry	3
ANS 225	Principles of Animal Nutrition	3	BCH 451 & BCH 452	Principles of Biochemistry	6
ANS 230 & ANS 231	Animal Nutrition and Animal Nutrition Lab	4		and Introductory Biochemistry Laboratory	
ANS 330	Laboratory Animal Science	3	BCH 453/553	Biochemistry of Gene Expression	3
ANS 415/515/ NTR 415/515/ PO 415/515	Comparative Nutrition	3	BCH 454	Advanced Biochemistry Laboratory	4
ANS 452/552/ PHY 452/552	Comparative Reproductive Physiology and	3	BCH 455/555	Proteins and Molecular Mechanisms	3
ANS 453/553	Biotechnology Physiology	3	BCH 552	Experimental Biochemistry	3
	and Genetics		Science and Ma	ath (BIT)	
	of Growth and		BEC 463/563/	Fermentation	2
ANS 454/554/	Development  Lactation, Milk	3	CHE 463/563	of Recombinant Microorganisms	
NTR 454	and Nutrition	2	BIO 572	Proteomics	3
ANS/NTR 561 ANS/BCH 571	Equine Nutrition	3	BIT/MB 210	Phage Hunters	3
ANS/BCH 37 I	Regulation of Metabolism	3	BIT/MB 211 BIT 410	Phage Genomics  Manipulation of	2
FS/NTR 301	Introduction to Human Nutrition	3	BIT 410	Recombinant DNA	•
NTR 419	Human Nutrition and Chronic Disease	3	BIT 463/563	Fermentation of Recombinant Microorganisms	2
Science and Ma			BIT 464/564	Protein	2
ANT 251	Physical Anthropology	3	BIT 466/566/	Purification Animal Cell	2
ANT 370	Introduction to Forensic	3	PO 466/566	Culture Techniques	2
ANT 371	Anthropology Human Variation	3	BIT 467/567	PCR and DNA	2
ANT 421/521	Human	3	BIT 471/571	Fingerprinting RNA Interference	2
	Osteology		DI 47 1/37 I	and Model	2
ANT 424/524	Bioarchaeology	3	DIT 470/570	Organisms	0
ANT 475/575	Environmental Archaeology	3	BIT 473/573	Protein Interactions	2
ANT 483/583	Theories of Archaeological Research	3	BIT 474/574	Plant Genetic Engineering	2
ANT 529	Advanced	4	BIT 476	Applied Bioinformatics	2
	Methods		BIT 477/577	Metagenomics	2
	in Forensic Anthropology		BIT/PB 481	Plant Tissue Culture and	2
ANT 585	Skeletal Biology in Anthropology	3	BIT 510	Transformation Core	4
Science and Ma			DI1 310	Technologies in	7
ANS/BCH 571	Regulation of Metabolism	3		Molecular and Cellular Biology	

BIT/CH 572	Proteomics	3	CH 452	Advanced	4
Science and Ma		0		Measurement Techniques I	
BIO/BMA 560	Population Ecology	3	CH 463/563	Molecular Origins of Life	3
BMA 567	Modeling of Biological	4	Science and Ma		
	Systems		AEC 409/509	Ecology and	4
BMA 573	Mathematical Modeling of Physical and	3		Conservation of Freshwater Invertebrates	
	Biological Processes I		ENT 207	Insects and Human Disease	3
BMA 574	Mathematical Modeling of Physical and Biological	3	ENT 305	Introduction to Forensic Entomology	3
	Processes II		ENT/FOR 402	Forest Entomology	3
Science and Ma	th (CBS)		ENT 425	General	3
CBS 565	Fundamentals	3		Entomology	
	of Biomedical Sciences		ENT 502	Insect Diversity	4
CBS 570	Methods in Biomedical Sciences	1	ENT 503	Insect Morphology and Physiology	3
CBS 580	Epidemiology I	3	ENT/GES 506	Principles of Genetic Pest	3
Science and Ma				Management	
CH 230	Computational Chemistry Lab I	1	ENT 526	Organic Agriculture:	3
CH 232	Computational Chemistry Lab II	1		Principles and Practices	
CH 315	Quantitative Analysis	3	ENT/ZO 582	Medical and Veterinary Entomology	3
CH 331	Introductory Physical	4	Science and Ma		
CI 101	Chemistry	2	ES 300	Energy and Environment	3
CH 401	Systematic Inorganic Chemistry I	3	ES 400	Analysis of Environmental	3
CH 403	Systematic	3		Issues	
	Inorganic Chemistry II		Science and Ma	,	_
CH 431	Physical Chemistry I	3	AEC 423	Introduction to Fisheries Sciences	1
CH 433	Physical	3		Laboratory	
011.405	Chemistry II		ENT 402	Forest Entomology	3
CH 435	Introduction to Quantum Chemistry	3	FOR 252	Introduction to Forest Science	3
CH 441	Forensic	3	FOR 260	Forest Ecology	4
CH 442	Chemistry Advanced	4	FOR 261	Forest Communities	2
011 442	Synthetic	7	FOR 264	Forest Wildlife	1
	Techniques		FOR 265	Fire Management	1
CH 444	Advanced Synthetic	4	FOR 303	Silvics and Forest Tree Physiology	3
	Techniques II		FOR 304	Theory of Silviculture	4

FOR 318	Forest Pathology	3	AEC 587		
FOR 330	North Carolina Forests	3	FW 221	Conservation of Natural	3
FOR 339				Resources	
FOR 402	Forest Entomology	3	FW 311	Piedmont Wildlife Ecology and Management	3
FOR 405	Forest Management	4	FW 312	Fisheries Techniques and	1
FOR 411	Forest Tree Genetics and Biology	3	FW 313	Management Mountain Wildlife	1
FOR 414	World Forestry	3		Ecology and	
FOR 415	World Forestry Study Tour	1	FW 314	Management Coastal Ecology	1
FOR 420	Watershed and Wetlands Hydrology	4	FW 333	and Management  Conservation  Biology in	3
FOR 501	Dendrology	4	EM 050	Practice	•
FOR 503			FW 353	Wildlife Management	3
FOR 505	Forest Management	4	FW 403	Urban Wildlife Management	3
FOR 507	Silviculture Mini Course	1	FW 404	Wildlife Habitat Management	3
FOR 510	Introduction to GPS	1	FW 444	Mammalogy	3
FOR 513	Silviculture for Intensively	3	FW 453	Principles of Wildlife Science	4
	Managed Plantations		FW 460	International Wildlife Management and	3
FOR 520	Watershed and Wetlands	4	FW 465	Conservation African Ecology	4
FOR 540	Hydrology Advanced	3	1 11 403	and Conservation	<b>-</b>
FOR 540	Dendrology	3	FW 515	Fish Physiology	3
FOR 562	Forest	1	FW 544	Mammalogy	3
	Communities of the Southern		FW 553	Principles of Wildlife Science	4
FOR 575	Appalachians Advanced	3	FW 560	International Wildlife	3
101070	Terrestrial Ecosystem			Management and Conservation	
	Ecology		FW 565	African Ecology	4
FOR 583	Tropical Forestry	3	FW 586	and Conservation	
FW 221	Conservation of Natural	3	FW 587		
	Resources		Science and Ma	ath (GN)	
FW 404	Wildlife Habitat Management	3	GN 301	Genetics in Human Affairs	3
NR 420/520	Watershed and Wetlands Hydrology	4	GN 312	Elementary Genetics Laboratory	1
PP 318	Forest Pathology	3	GN 421	Molecular	3
Science and Ma	• •			Genetics	
AEC 420	Introduction to Fisheries Science	3	GN 423	Population, Quantitative and	3
AEC 515	Fish Physiology	3		Evolutionary Genetics	
AEC 586				Genetics	

GN 425	Advanced Genetics	2	LOG 335 MA 225	Symbolic Logic Foundations	3
GN 427	Laboratory	2	WA 225	of Advanced Mathematics	3
GN 421	Introductory Bioinformatics	3	MA 242	Calculus III	4
GN 434	Genes and Development	3	MA 302	Numerical Applications	1
GN 441	Human and Biomedical Genetics	3	MA 303	to Differential Equations Linear Analysis	3
GN 450	Conservation	3	MA 305	Introductory	3
GN 451	Genetics Genome Science	3		Linear Algebra and Matrices	
GN 453	Personal	3	MA 315	Mathematics	4
GN 461	Genomics Advanced	3		Methods in Atmospheric	
011 101	Bioinformatics	Ŭ		Sciences	
GN 521	Molecular Genetics	3	MA 325	Introduction to Applied	3
GN 541	Human and	3	MA 331	Mathematics Differential	3
ON 550	Biomedical Genetics	2	WA 331	Equations for the Life Sciences	J
GN 550	Conservation Genetics	3	MA 335	Symbolic Logic	3
Science and Ma	ath (MA)		MA 341	Applied	3
BMA 573	Mathematical	3		Differential Equations I	
	Modeling of Physical and		MA 351	Introduction	3
	Biological Processes I			to Discrete Mathematical	
BMA 574	Mathematical	3	MA 401	Models Applied	3
	Modeling of Physical and		IVIA 40 I	Differential	3
	Biological			Equations II	
CSC 416	Processes II Introduction to	3	MA 402	Mathematics of Scientific	3
000 410	Combinatorics	·		Computing	
CSC 427	Introduction to Numerical	3	MA 403	Introduction to Modern Algebra	3
	Analysis I		MA 405	Introduction to	3
CSC 428	Introduction	3		Linear Algebra	
	to Numerical Analysis II		MA 408	Foundations of Euclidean	3
CSC 565	Graph Theory	3		Geometry	
CSC 580	Numerical Analysis I	3	MA 410	Theory of Numbers	3
CSC 583	Introduction to Parallel	3	MA 413	Short-Term Actuarial Models	3
	Computing		MA 416	Introduction to	3
E 531	Dynamic Systems and	3	MA 421	Combinatorics Introduction to	3
	Multivariable		1711 \ 741	Probability	Ŭ
EIM 547	Control I	2	MA 425	Mathematical	3
FIM 547	Stochastic Calculus for	3	MA 426	Analysis I Mathematical	3
	Finance			Analysis II	
ISE 505	Linear Programming	3			

MA 427	Introduction to Numerical Analysis I	3	MA 534	Introduction To Partial Differential Equations	3
MA 428	Introduction to Numerical Analysis II	3	MA 537	Nonlinear Dynamics and Chaos	3
MA 430	Mathematical Models in the Physical Sciences	3	MA 544	Computer Experiments In Mathematical Probability	3
MA 432	Mathematical Models in Life Sciences	3	MA 546	Probability and Stochastic Processes I	3
MA 437	Applications of Algebra	3	MA 547	Stochastic Calculus for Finance	3
MA 444	Problem Solving Strategies for Competitions	1	MA 551	Introduction to Topology	3
MA 501	Advanced Mathematics for	3	MA 555	Introduction to Manifold Theory	3
MA 502	Engineers and Scientists I Advanced	3	MA 561	Set Theory and Foundations Of Mathematics	3
	Mathematics for Engineers and Scientists II		MA 573	Mathematical Modeling of Physical and	3
MA 504	Introduction to Mathematical Programming	3	MA 574	Biological Processes I Mathematical	3
MA 505	Linear Programming	3	IVIA 574	Modeling of Physical and	3
MA 511	Advanced Calculus I	3		Biological Processes II	
MA 513	Introduction To Complex	3	MA 580	Numerical Analysis I	3
MA 515	Variables Analysis I	3	MA 583	Introduction to Parallel	3
MA 518	Geometry of	3		Computing	
	Curves and Surfaces		MA 584	Numerical Solution of Partial	3
MA 520	Linear Algebra	3		Differential Equations	
MA 521	Abstract Algebra	3		Finite Difference Methods	
MA 522	Computer Algebra	3	MA 587	Numerical Solution of Partial	3
MA 523	Linear Transformations and Matrix Theory	3		Differential EquationsFinite Element Method	
MA 524	Combinatorics I	3	MEA 315	Mathematics Methods in	4
MA 531	Dynamic Systems and Multivariable	3		Atmospheric Sciences	
MA 522	Control I	3	OR 504	Introduction to Mathematical	3
MA 532	Ordinary Differential Equations I	S	OR 505	Programming Linear Programming	3
				3	

OR 531	Dynamic Systems and	3	MB 455	Microbial Biotechnology	3
	Multivariable Control I		MB 461	Molecular Virology	3
OR 565	Graph Theory	3	MB 470	Emerging and	3
ST 412	Long-Term Actuarial Models	3		Re-emerging Infectious	
ST 413	Short-Term Actuarial Models	3	MB 501	Diseases Biology of Plant	3
ST 546	Probability and Stochastic	3	MB 505	Pathogens Food	3
Science and Ma	Processes I		MB 506	Microbiology Food	2
BIT 210	Phage Hunters	3	WID 000	Microbiology Lab	_
BIT 211	Phage Genomics	2	MB 520	Fundamentals	2
FS 405/505	Food Microbiology	3		of Microbial Cell Biotransformations	
FS 406/506	Food	2	MB 532	Soil Microbiology	4
	Microbiology Lab		MB 535	Bacterial	3
MB 200	The Fourth	3	MD 555	Pathogenesis	2
	Horseman: Plagues that		MB 555	Microbial Biotechnology	3
	Changed the World		MB 575	Introduction to Mycology	4
MB 211	Phage Genomics	2	PB 501	Biology of Plant	3
MB 351	General Microbiology	3	PB 575	Pathogens Introduction to	4
MB 352	General	1		Mycology	
	Microbiology Laboratory		PP 501	Biology of Plant Pathogens	3
MB 354	Inquiry-Guided Microbiology Lab	1	PP 575	Introduction to Mycology	4
MB 360	Scientific Inquiry	3	SSC 532	Soil Microbiology	4
	in Microbiology: At the Bench		Science and Ma	th (MEA)	
MB 405	Food	3	CE 435	Engineering Geology	3
	Microbiology		CE 479	Air Quality	3
MB 406	Food	2	CE 581	Fluid Mechanics	3
MB 411	Microbiology Lab Medical	3		in Natural Environments	
	Microbiology		ET 320	Fundamentals of	3
MB 412	Medical	1		Air Pollution	
	Microbiology Laboratory		GIS 582	Geospatial Modeling	3
MB 414	Microbial Metabolic Regulation	3	MA 315	Mathematics Methods in Atmospheric	4
MB 420	Fundamentals	2		Sciences	
	of Microbial Cell Biotransformations		MEA 200	Introduction to Oceanography	3
MB 435	Bacterial Pathogenesis	3	MEA 202	Geology II: Historical	3
MB 441	Immunology	3	MEA 210	Oceanography	1
MB 451	Microbial Diversity	3		Lab	
MB 452	Microbial	2	MEA 211	Geology II Laboratory	1
	Diversity Lab		MEA 220	Marine Biology	3

MEA 250	Introduction to Coastal Environments	3	MEA 454	Marine Physical- Biological Interactions	3
MEA 251	Introduction	1	MEA 455	Micrometeorology	3
	to Coastal Environments Laboratory		MEA 459	Field Investigation of Coastal	5
MEA 300	Environmental Geology	4	MEA 462	Processes Observational	3
MEA 312 MEA 315	Atmospheric Thermodynamics Mathematics	4		Methods and Data Analysis in Marine Physics	
WEASIS	Methods in	7	MEA 463	Fluid Physics	3
	Atmospheric Sciences		MEA 464	Ocean Circulation	3
MEA 320	Fundamentals of Air Pollution	3	MEA 465	Systems Geologic Field	4
MEA 321	Fundamentals of	3		Camp	
	Air Quality and Climate Change		MEA 467	Marine Meteorology	3
MEA 323	Geochemistry of Natural Waters	3	MEA 469	Ecology of Coastal	3
MEA 369	Life on Earth: Principles of	3	MEA 470	Resources Introduction to	3
MEA 410	Paleontology Introduction to	3	MEA 471	Geophysics Exploration and	3
MEA 411	Mineralogy Marine Sediment	3		Engineering Geophysics	
MEA 412	Transport Atmospheric Physics	3	MEA 473	Principles of Chemical Oceanography	3
MEA 415	Climate Dynamics	3	MEA 476	Worldwide River and Delta	3
MEA 421	Atmospheric Dynamics I	3		Systems: Their Evolution and	
MEA 422	Atmospheric Dynamics II	3	MEA 479	Human Impacts Air Quality	3
MEA 425	Introduction to Atmospheric Chemistry	3	MEA 481	Geomorphology: Earth's Dynamic Surface	3
MEA 440	Igneous and Metamorphic	3	MEA 485	Introduction to Hydrogeology	3
MEA 443	Petrology Synoptic Weather	4	MEA 510	Air Pollution Meteorology	3
	Analysis and Forecasting		MEA 511	Introduction to Meteorological	3
MEA 444	Mesoscale Analysis and Forecasting	4	MEA 514	Remote Sensing Advanced Physical	3
MEA 449	Principles of Biological Oceanography	3	MEA 515	Meteorology Climate Dynamics	3
MEA 450	Introductory Sedimentology and Stratigraphy	4	MEA 525	Introduction to Atmospheric Chemistry	3
MEA 451	Structural Geology	4	MEA 540	Principles of Physical	3
				Oceanography	

MEA 549						
MEA 554 billion and billion and interactions         Marine Physical billion and interactions         8 555 billion and metabolism interactions         According to Mattabolism interactions         Set 555 billion and metabolism interactions         Exercise Mutrition         3           MEA 578 billion and principal	MEA 549		3	FS 301		3
Biological interactions   F8 585   Restories Nutrition   3		Oceanography		FS 401	Advanced	3
MEA 562         Marine Sediment Transport         3         FS 557 (an including and principoral production) and functional and functional production to a production of coasing and functional and functional and functional production to a principles of a functional production of a functional production of a functional production of the function and production of the function of	MEA 554		3			
Transport		Interactions		FS 555	Exercise Nutrition	3
MAE A 573         Geological oceanography         3         NTR 301 introduction to Introdu	MEA 562	Marine Sediment	3	FS 557	Nutraceuticals	3
MEA 573         Oceanography         NTR 301         Introduction to 3 concorrection of Chemical of		Transport			and Functional	
MEA 573         Principles of Chemical Oceanography         3         MTR 401         Advanced Metabolism (Nutrition and Nutrition and Chronic Disease (Nutrition and Nutrition and	MEA 570	-	3		Foods	
MEA 574	MEA 573	= : :	3	NTR 301		3
MEA 574   Igneous   Ig		of Chemical		NTR 401	Advanced	3
		Oceanography			Nutrition and	
Petrology	MEA 574		3		Metabolism	
MEA 577         Electron Microprobe Analysis of Geologic Material Geo		•		NTR 415		3
Microproble	MEΔ 577		2	NTD 440		2
Analysis of Geologic Material   Principles of Air Quality   Augustion   Principles of Air Quality   Printiples of Air Quality   Principles of Air Quality   Principles o	WEASTT		2	NTR 419		3
MEA 579						
MEA 579 Air Quality Engineering         Principles of Air Quality Engineering         Available Sequence of Mutition and Nutrition Andelabolism Nutrition Nutrition           MEA 580 Processing         Fluid Mechanics in Natural Environments         NTR 515 Period Ruminant Nutrition         Nutrition           MEA 581 Physical Modeling         Geospatial Nodeling         NTR 555 Period Nutrition         3           MEA 582 Physical Hydrogeology         Physical Phydrogeology         NTR 557 Period Ruminant Nutrition         3           MEA 599 Regional American American Phydrogeology         Po 415/515 Period Ruminant Nutrition         3           Science and Math (MT)           MT 323 Introduction American Prioduct Piber and Yam Formation         Po 415/515 Perioduct Piber and Yam Formation         Bio 300 Perioduct Piber and Yam Formation         Bio 300 Perioduct Piber and Yam Formation         Po 415/515 Perioduct Piber Amer				NTR 500		3
Air Quality Engineering         Air Quality Modeling and Forecasting         Air Season Material Metabolism         Air Season Metabolisman         Air Season Metabolisman         Air Season Metabolisman	MEA 579	Principles of	3	1111 300		3
MEA 580				NTR 501		3
Modeling and Forecasting         NTR 515         Comparative Nutrition         3           MEA 581         Fluid Mechanics in Natural Environments         NTR 550         Applied Ruminant Nutrition         3           MEA 582         Geospatial Environments         NTR 555         Exercise Nutrition         3           MEA 582         Physical Hydrogeology         NTR 557         Nutraceuticals and Functional Foods         3           MEA 589         Regional Hydrogeology         1-6 Poods         PO 415/515         Comparative Nutrition         3           Science and Math (MT)         Science and Math (PB)         PO 415/515         Comparative Nutrition         3           NTR 561         Equine Nutrition         3           Applied Nutrition         3           PO 415/515         Comparative Nutrition         3           NTR 561         Equine Nutrition         4		Engineering		14114 001		Ğ
Forecasting	MEA 580	Air Quality	4		Metabolism	
MEA 581		-		NTR 515	Comparative	3
In Natural Environments		Forecasting			•	
Environments	MEA 581		3	NTR 550	Applied Ruminant	3
MEA 582					Nutrition	
MEA 585         Physical hydrogeology         3 and Functional Fnoods         And Functional Fnoods         3 and Functional Fnoods         4 processed of Fnoods         4 pro	MEA 500			NTR 555	Exercise Nutrition	3
MEA 585         Physical Hydrogeology         3         Foods Foods Foods Foods           MEA 599 Regional Geology of North America         1-6 Geology of North America         PO 415/515 Comparative Nutrition         3           Science and Math (MT)         Science and Math (PT)           MT 323         Introduction to Theory and Practice of Medical Fiber and Yarn Formation         AEC 360 Ecology         4           MT 366         Biotextile Product Formation Formation         BIT 476 Applied Bioinformatics         Applied Bioinformatics           MT 366         Biotextile Product Biotextiles         3         BIT 481 Plant Tissue Culture and Transformation         2           MT 432         Evaluation of Biotextiles         3         POR 565 Plant Community A Ecology         4           MT/PCC 471         Chemistry of Biopolymers         3         MB 501 Biology of Plant Silve Googy         3           Science and Math (NTT)         ANS 415 Comparative Nutrition         3         MB 505 Diology of Plant Googy	MEA 582	•	3	NTR 557	Nutraceuticals	3
Hydrogeology   Hydrogeology   Hydrogeology   Regional   1-6   Geology of North   America   PO 415/515   Comparative   3   Nutrition   N	MEA FOE	-	2		and Functional	
MEA 599   Regional Geology of North America   PO 415/515   Comparative Nutrition   Science and Math (MT)   Science and Math (PB)	IVIEA 303		3		Foods	
Comparative   Nutrition   Nu	MEΔ 500		1-6	NTR 561	Equine Nutrition	3
Number   Name   Number   Num	WILA 333		1-0	PO 415/515	•	3
NT 323						
MT 323         Introduction to Theory and Practice of Medical Fiber and Yarn Formation         Applied Biology         Evolutionary Biology         4           MT 366         Biotextile Product Development         3         BIT 476 Biology         3           MT 432         Evaluation of Biotextiles         3         BIT 481 Plant Tissue Culture and Transformation         2           MT/PCC 471         Chemistry of Biopolymers         3         FOR 565 Plant Community Ecology         4           ANS 415         Comparative Nutrition         3         MB 575 Introduction to Mycology         1           ANS 454/554/FS Lactation, Milk And Station Autrition         3         PB 205 Our Green World         3           ANS 550         Applied Ruminant Nutrition         3         PB 219 Plants in Folklore, Myth,         3	Science and Ma	th (MT)			ath (PB)	
Biology   Biol			3			4
BIO 414 Cell Biology   3   Second Property   Cell Biology   3   Second Property   Cell Biology   3   Second Property		to Theory		BIO 330	•	3
Fiber and Yarn Formation  MT 366 Biotextile Product Development  MT 432 Evaluation of Biotextiles  MT/PCC 471 Chemistry of Biopolymers  ANS 415 Comparative Nutrition  ANS 454/554/FS Lactation, Milk 3 PB 219 Plants in Folklore, Myth,  MT 456 Biotextile Product 3 BIT 481 Plant Tissue Culture and Transformation  FOR 565 Plant Community 4 Plant Community 4 Plant Community 5 Plant Community 6 Plant Community 7 Plants in Folklore, Myth,					= :	
Formation  MT 366 Biotextile Product Development  MT 432 Evaluation of Biotextiles  MT/PCC 471 Chemistry of Biopolymers  Science and Math (NTR)  ANS 415 Comparative Nutrition  ANS 454/554/FS Lactation, Milk 3 ANS 550 Applied Ruminant Nutrition  Biotextiles  BIT 481 Plant Tissue Coulture and Transformation  FOR 565 Plant Community Ecology Biology of Plant Biology of Plant Pathogens  MB 501 Biology of Plant Pathogens  MB 575 Introduction to Mycology  ANS 454/554/FS Lactation, Milk 3 PB 205 Our Green World 3  ANS 550 Applied Ruminant Nutrition  PB 215 PB 219 Plants in Folklore, Myth,						
MT 366 Biotextile Product Development  MT 432 Evaluation of Biotextiles  MT/PCC 471 Chemistry of Biopolymers  Science and Math (NTR)  ANS 415 Comparative Nutrition  ANS 454/554/FS ANS 454/554/FS ANS 454/550 Applied Ruminant Nutrition  Biotextile Product A BIT 481 Plant Tissue Culture and Transformation  FOR 565 Plant Community Ecology MB 501 Biology of Plant Pathogens  MB 575 Introduction to Mycology  ANS 550 Applied Ruminant Nutrition  BIT 481 Plant Tissue Culture and Transformation  FOR 565 Plant Community Ecology MB 501 Biology of Plant ANS 575 Introduction to Mycology ANS 575 Applied Ruminant Nutrition  PB 205 Applied Ruminant Nutrition  PB 215 Medicinal Plants ANS 550 Applied Ruminant Nutrition  Folklore, Myth,				BIT 476		2
Development  MT 432 Evaluation of Biotextiles  MT/PCC 471 Chemistry of Biopolymers  ANS 415 Comparative Nutrition  ANS 454/554/FS Lactation, Milk 3 ANS 550 Applied Ruminant Nutrition  Development  Culture and Transformation  FOR 565 Plant Community 4 Ecology  MB 501 Biology of Plant 3 Pathogens  MB 575 Introduction to Mycology  ANS 2550 Applied Ruminant Nutrition  PB 215 Medicinal Plants in Folklore, Myth,	MT 366		3	RIT //81		2
MT 432 Evaluation of Biotextiles 3 FOR 565 Plant Community 4  MT/PCC 471 Chemistry of Biopolymers MB 501 Biology of Plant 3  Science and Math (NTR) Pathogens MB 575 Introduction to Mycology  ANS 415 Comparative Nutrition Mycology MB 575 Our Green World 3  ANS 454/554/FS Lactation, Milk 3 PB 205 Our Green World 3  ANS 550 Applied Ruminant Nutrition PB 215 Medicinal Plants 3  ANS 550 Applied Ruminant Nutrition Folklore, Myth,	W1 000		0	DIT 401		2
Biotextiles  MT/PCC 471 Chemistry of Biopolymers  Science and Math (NTR)  ANS 415 Comparative Nutrition  ANS 454/554/FS Lactation, Milk 3 PB 205 Our Green World 3  ANS 550 Applied Ruminant Nutrition  Biology of Plant 2 Biology of Plant 3  MB 501 Biology of Plant 3  MB 575 Introduction to Mycology  APB 205 Our Green World 3  PB 215 Medicinal Plants 3  APB 219 Plants in Folklore, Myth,	MT 432		3			
MT/PCC 471 Chemistry of Biopolymers 3 MB 501 Biology of Plant 3 Science and Math (NTR) Pathogens  ANS 415 Comparative Nutrition Mycology  ANS 454/554/FS Lactation, Milk 3 PB 205 Our Green World 3 554 and Nutrition PB 215 Medicinal Plants 3 ANS 550 Applied Ruminant Nutrition PB 219 Plants in Folklore, Myth,				FOR 565	Plant Community	4
Science and Math (NTR)  ANS 415 Comparative Nutrition  ANS 454/554/FS Lactation, Milk 3 FB 205 ANS 254 ANS 550 Applied Ruminant Nutrition  Pathogens  MB 575 Introduction to Mycology  Our Green World 3 FB 215 Medicinal Plants 3 FOlklore, Myth,	MT/PCC 471	Chemistry of	3		•	
ANS 415 Comparative Nutrition 3 MB 575 Introduction to Mycology 4  ANS 454/554/FS Lactation, Milk 3 PB 205 Our Green World 3  554 and Nutrition PB 215 Medicinal Plants 3  ANS 550 Applied Ruminant Nutrition PB 219 Plants in Folklore, Myth,		Biopolymers		MB 501	Biology of Plant	3
ANS 415 Comparative Nutrition Substitution S	Science and Ma					
Nutrition Mycology  ANS 454/554/FS Lactation, Milk 3 PB 205 Our Green World 3  554 and Nutrition PB 215 Medicinal Plants 3  ANS 550 Applied Ruminant Nutrition PB 219 Plants in Folklore, Myth,	ANS 415	Comparative	3	MB 575	Introduction to	4
554 and Nutrition PB 215 Medicinal Plants 3 ANS 550 Applied Ruminant 3 PB 219 Plants in 3 Nutrition Folklore, Myth,					Mycology	
ANS 550 Applied Ruminant 3 PB 219 Plants in 3 Nutrition 3 Folklore, Myth,	ANS 454/554/FS	Lactation, Milk	3	PB 205	Our Green World	3
Nutrition Folklore, Myth,	554	and Nutrition		PB 215	Medicinal Plants	3
, · , · , ·	ANS 550		3	PB 219	Plants in	3
ANS 561 Equine Nutrition 3 and religion						
	ANS 561	Equine Nutrition	3		and religion	

PB 220 PB 250	Local Flora Plant Biology	3	MB 575	Introduction to Mycology	4
PB 321	Introduction to Whole Plant	3	PB 501	Biology of Plant Pathogens	3
PD 000	Physiology		PB 575	Introduction to Mycology	4
PB 360	Ecology	4	DD 045		4
PB 400	Plant Diversity and Evolution	4	PP 315	Principles of Plant Pathology	4
PB 403	Systematic	4	PP 318	Forest Pathology	3
PB 421	Botany Plant Physiology	3	PP 501	Biology of Plant Pathogens	3
PB 445	Paleobotany	4	PP 502	Plant Disease:	2
PB 464	Rare Plants of North Carolina	3		Methods & Diagnosis	
PB 480	Introduction to Plant	3	PP 575	Introduction to Mycology	4
	Biotechnology		Science and Ma	th (PY)	
PB 481	Plant Tissue Culture and Transformation	2	PY 252	Instrumental and Data Analysis for Physics	2
PB 501	Biology of Plant Pathogens	3	PY 301	Introduction to Quantum Mechanics	3
PB 503	Systematic Botany	4	PY 328	Stellar and	3
PB 513	Plant Anatomy	2		Galactic Astrophysics	
PB 545	Paleobotany	4	PY 341	Relativity,	3
PB 564	Rare Plants of North Carolina	3	1 1 041	Gravitation and Cosmology	Ŭ
PB 570	Plant Functional Ecology	3	PY 401	Quantum Physics	3
PB 580	Introduction to Plant Biotechnology	3	PY 402	Quantum Physics II	3
PP 501	Biology of Plant	3	Science and Ma	th (SSC)	
PP 575	Pathogens Introduction to		MB 352	General Microbiology	1
PP 5/5	Mycology	4		Laboratory	
Science and Mar			SSC 200	Soil Science	3
PHY 503	General Physiology I	3	SSC 201	Soil Science Laboratory	1
PHY 504	General Physiology II	3	SSC 332	Environmental Soil Microbiology	3
PHY 524	Comparative Endocrinology	3	SSC 341	Soil Fertility and Nutrient Management	3
PO 524	Comparative Endocrinology	3	SSC 342	Soil and Plant Nutrient Analysis	1
Science and Ma	th (PP)		SSC 421	Nutricit Arialysis	
CS 502	Plant Disease: Methods & Diagnosis	2	SSC 427	Biological Approaches to Sustainable Soil	3
FOR 318	Forest Pathology	3		Systems	
HS 502	Plant Disease: Methods & Diagnosis	2	SSC 442	Soil and Environmental Biogeochemistry	3
MB 501	Biology of Plant Pathogens	3	SSC 452	Soil Classification	4

SSC 461 SSC 470	Soil Physical Properties and Plant Growth Wetland Soils	3	ST 372	Introduction to Statistical Inference and Regression	3
SSC 511	Soil Physics	4	ST 401	Experiences in	4
SSC 521	Soil Chemistry	3		Data Analysis	
SSC 532	Soil Microbiology	4	ST 412	Long-Term	3
SSC 541	Soil Fertility	3		Actuarial Models	
SSC 545	Remote Sensing	3	ST 413	Short-Term	3
	Applications in Soil Science and Agriculture		ST 421	Actuarial Models Introduction to Mathematical Statistics I	3
SSC 551	Soil Morphology, Genesis and Classification	3	ST 422	Introduction to Mathematical Statistics II	3
SSC 562	Environmental Applications Of Soil Science	3	ST 430	Introduction to Regression	3
SSC 570	Wetland Soils	3	ST 431	Analysis Introduction to	3
Science and Mat	th (ST)		31 431	Experimental	3
BUS 350	Economics	3		Design	
	and Business Statistics		ST 432	Introduction to Survey Sampling	3
EC 351	Econometrics I	3	ST 435	Statistical	3
ECG 561	Applied Econometrics I	3		Methods for Quality and	
MA 412	Long-Term Actuarial Models	3		Productivity Improvement	
MA 413	Short-Term Actuarial Models	3	ST 445	Introduction to Statistical	3
MA 546	Probability and Stochastic Processes I	3		Computing and Data Management	
PSY 240	Introduction to Behavioral Research I	3	ST 505	Applied Nonparametric Statistics	3
PSY 241	Introduction to Behavioral Research I Lab	1	ST 511	Statistical Methods For Researchers I	3
PSY 242	Introduction	3	ST 512	Statistical	3
	to Behavioral Research II			Methods For Researchers II	
PSY 243	Introduction to Behavioral Research II Lab	2	ST 520	Statistical Principles of Clinical Trials	3
ST 311	Introduction to Statistics	3	ST 535	Statistical Methods for	3
ST 312	Introduction to Statistics II	3		Quality and Productivity Improvement	
ST 350	Economics and Business Statistics	3	ST 546	Probability and Stochastic Processes I	3
ST 371	Introduction to Probability and Distribution	3	ST 561	Applied Econometrics I	3
	Theory		Science and Ma		

TOX 401	Principles of Toxicology	4
TOX 415	Ecotoxicology	4
TOX 501	Principles of Toxicology	4
TOX 515	Environmental Toxicology	4
Science and Mat	h (ZO)	
AEC 409	Ecology and Conservation of Freshwater Invertebrates	4
AEC 501	Avian Ecology	4
AEC 509	Ecology and Conservation of Freshwater Invertebrates	4
AEC 515	Fish Physiology	3
AEC 586		
AEC 587		
ENT 582	Medical and Veterinary Entomology	3
FW 515	Fish Physiology	3
FW 586		
FW 587		
MEA 449	Principles of Biological Oceanography	3
MEA 549	Principles of Biological Oceanography	3
PHY 503	General Physiology I	3
PHY 504	General Physiology II	3
PHY 524	Comparative Endocrinology	3
PO 524	Comparative Endocrinology	3
ZO 334	Captive Animal Biology Field Laboratory	2
ZO 350	Animal Phylogeny and Diversity	4
ZO 582	Medical and Veterinary Entomology	3

## **Semester Sequence**

This is a sample.

First Year		
Fall Semester		Hours
LSC 101	Critical and Creative Thinking in the Life Sciences <sup>1</sup>	2
BIO 181	Introductory Biology: Ecology, Evolution, and Biodiversity	4
CH 101	Chemistry - A Molecular Science <sup>1</sup>	3
CH 102	General Chemistry Laboratory <sup>1</sup>	1
MA 131	Calculus for Life and Management Sciences A <sup>1</sup>	3
LSC 103	Exploring Opportunities in the Life Sciences	1
	rcise Studies (http://catalog.ncsu.edu/ ategory-requirements/gep-health-exercise-	1
	Hours	15
Spring Semester		
BIO 183	Introductory Biology: Cellular and Molecular Biology <sup>1</sup>	4
CH 221	Organic Chemistry I 1	3
CH 222	Organic Chemistry I Lab <sup>1</sup>	1
ENG 101	Academic Writing and Research <sup>1</sup>	4
MA 231	Calculus for Life and Management Sciences B <sup>1</sup>	3
Second Year Fall Semester		
CH 223	Organic Chemistry II 1	3
CH 224	Organic Chemistry II Lab <sup>1</sup> Introduction to Statistics <sup>1</sup>	1
ST 311 or ST 371	or Introduction to Statistics or Introduction to Probability and Distribution Theory	3
ZO 250	Animal Anatomy and Physiology <sup>1</sup>	4
GEP Humanities (http category-requiremen	o://catalog.ncsu.edu/undergraduate/gep- ts/gep-humanities/)	3
	rcise Studies (http://catalog.ncsu.edu/ ategory-requirements/gep-health-exercise-	1
	Hours	15
Spring Semester		
Ecology Requiremen	t (p. 1) <sup>1</sup>	4
GN 311	Principles of Genetics <sup>1</sup>	4
CH 201	Chemistry - A Quantitative Science <sup>1</sup>	3
CH 202	Quantitative Chemistry Laboratory <sup>1</sup>	1
, ,	Perspectives (http://catalog.ncsu.edu/ ategory-requirements/gep-interdisciplinary-	3
	Hours	15
Third Year		
Fall Compoter		
Fall Semester		
Animal Phylogeny Re	equirement (p. 1) <sup>1</sup>	4
	equirement (p. 1) <sup>1</sup> College Physics I <sup>1</sup>	4

	(http://catalog.ncsu.edu/undergraduate/ ments/gep-social-sciences/)	3
gop canagery require	Hours	14
Spring Semester		
Advanced Writing Re	quirement (p. 2) <sup>1</sup>	3
Zoology Elective (p. 2		3
PY 212	College Physics II <sup>1</sup>	4
<b>GEP Social Sciences</b>	(http://catalog.ncsu.edu/undergraduate/	3
gep-category-requirer	ments/gep-social-sciences/)	
Free Elective		3
	Hours	16
Fourth Year		
Fall Semester		
Zoology Elective (p. 2	2) 1	3
Zoology Elective (p. 2) <sup>1</sup>		
Science & Math Elect	ive (p. 3)	3
Science & Math Elect	ive (p. 3)	3
GEP Humanities (http category-requirement	o://catalog.ncsu.edu/undergraduate/gep- s/gep-humanities/)	3
	Hours	15
Spring Semester		
Zoology Elective (p. 2	2) 1	3
Science & Math Elect	ive (p. 3)	3
Free Elective		3
GEP Elective (http://ccategory-requirement	atalog.ncsu.edu/undergraduate/gep-s/)	3
Free Elective		3
	Hours	15
	Total Hours	120

<sup>&</sup>lt;sup>1</sup> A grade of C- or higher is required.

## **Career Opportunities**

Many students majoring in the Department of Biological Sciences take advantage of scholarship and honors programs available at NC State, including the University Honors Program and the University Scholars Program. In addition, we offer a discipline-based Undergraduate Honors Program in Biological Sciences (DBS Honors Program). The DBS Honors Program requires students to design a challenging program of advanced study, including eight credits of honors coursework in biology and at least two semesters of research or teaching scholarship.

Participants write an honors thesis and are required to present their scholarly work at a local, regional, or national meeting. Invitations to join the DBS Honors Program are sent in the first three weeks of the Fall and Spring semesters. Students in any major in the Department of Biological Sciences who have earned an overall GPA of 3.60 after completing 30-65 credit hours at NC State will receive an invitation to join the DBS Honors Program; transfer students in any of our majors who have earned an overall GPA of 3.60 in 15 credit hours at NC State also will receive an invitation.

Students who graduate from the Department of Biological Sciences are well prepared for employment in various government agencies and private industries. Graduates may continue their education with studies leading to advanced degrees in many areas of the biological sciences, including cell biology, ecology, microbiology, genetics, zoology,

neurobiology, and biomedical disciplines. Many choose to seek advanced degrees in medicine, dentistry, optometry, veterinary medicine, public health, and other health-related fields. Students who plan to seek certification for pre-college teaching may want to pursue a second major in the Department of Science, Technology, Engineering & Mathematics Education.

#### **Career Titles**

- · Animal Breeder
- · Animal Scientist
- Animal Trainer
- Aquaculture Specialist
- · Aquarium Curator
- Biochemist
- Biologist
- · Biology Professor
- · Conservation Scientist
- Environmental Planner
- Environmental Science and Protection Technician
- · Environmental Science Professor
- · Farmers and Ranchers
- · Fish and Game Warden
- Forester
- · Marine and Aquatic Biologist
- Park Naturalist
- Technical & Scientific Publications Editor
- Veterinarian (VMD)
- · Wildlife Biologist
- Wildlife Control Agent
- Zoo Veterinarian
- Zoologist

### **Learn More About Careers**

NCcareers.org (https://nccareers.org/)

Explore North Carolina's central online resource for students, parents, educators, job seekers and career counselors looking for high quality job and career information.

Occupational Outlook Handbook (https://www.bls.gov/ooh/)
Browse the Occupational Outlook Handbook published by the Bureau of Labor Statistics to view state and area employment and wage statistics. You can also identify and compare similar occupations based on your interests.

Career One Stop Videos (https://www.careeronestop.org/)
View videos that provide career details and information on wages,
employment trends, skills needed, and more for any occupation.
Sponsored by the U.S. Department of Labor.

Focus 2 Career Assessment (https://careers.dasa.ncsu.edu/explore-careers/career-assessments/) (NC State student email address required) This career, major and education planning system is available to current NC State students to learn about how your values, interests, competencies, and personality fit into the NC State majors and your future career. An NC State email address is required to create an account. Make an appointment with your career counselor (https://careers.dasa.ncsu.edu/about/hours-appointments/) to discuss the results.

### Zoology (BS)

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Focus 2 Apply Assessment (https://www.focus2career.com/Portal/Register.cfm?SID=1929) (Available to prospective students)
A career assessment tool designed to support prospective students in exploring and choosing the right major and career path based on your unique personality, interests, skills and values. Get started with Focus 2 Apply and see how it can guide your journey at NC State.

Zoological Association of America (https://zaa.org/)
Association of Zoos & Aquariums (https://www.aza.org/)