THE UNIVERSITY OF NEW MEXICO

Major Study Requirements for B.S. in Biology with a Concentration in EEOB

(Ecology, Evolution, and Organismal Biology)

Prior to Fall 2020

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Concentration in Ecology, Evolution, and Organismal Biology

Climate change and other pressing environmental problems have led to the increased importance of a solid understanding of Ecology, Evolution, and Organismal Biology (EEOB). The EEOB concentration is intended to provide a depth of understanding at multiple hierarchies of biological organization and expose students to the techniques, methodologies and approaches used by these subdisciplines. Students develop expertise with the biology of a group of organisms, familiarity with methodologies used in study, expertise with the systematics of classification, and significant hands-on experience in the field or research laboratory. The EEOB concentration is only available to students pursuing the Bachelor of Science and is designed to provide a comprehensive background forstudents planning to pursue graduate school or seek a career in a governmental agency.

*Faculty advisement is required for students who wish to complete the concentration in EEOB

Requirements

Credit Hours

1. Successful completion of the **four-course** introductory Biology sequence:

BIOL 2110C (BIOL 201L)	Cell & Molecular Biology	4
BIOL 2410C (BIOL 202L)	Genetics	4
BIOL 303/303L	Ecology & Evolution (UNM/University level only, can accept BIOL 203/203L if taken prior to Fall 2018)	4
BIOL 304/304L	Plant & Animal Form & Function (UNM/University level only, can accept BIOL 204/204L if taken prior to Fall 2018)	4
	Subtotal required for this category:	16

2. Successful completion of upper-division courses in **both** Ecology and Evolution:

BIOL 300	Evolution	3
BIOL 310 (or 409)	T: Principles of Ecology	3/4
	Subtotal required for this category:	6/7

3. Successful completion of at least **one** taxonomic based course from the following:

BIOL 450	General Virology	4
BIOL 463L	Flora of New Mexico	4
BIOL 482L/582L	Parasitology*	4
BIOL 484/584	Biology of Fungi*	4
BIOL 485L/585L	Entomology*	4
BIOL 486L	Ornithology	4
BIOL 487L	Ichthyology	4
BIOL 488L	Herpetology	4
BIOL 489L	Mammalogy	4
(Or substitution approved by faculty advisors)		

4. Successful completion of at least **one** synthetic/comparative taxonomic based course and lab from the following:

BIOL 351	Microbiology w/lab	3
BIOL 360L	General Botany	4
BIOL 371L	Invertebrate Biology	4
BIOL 386L	General Vertebrate Zoology	4

5. Successful completion of at least **one** statistics course from the following:

PSYC 2510 (PSY 200)	Statistical Principles	3
MATH 1350 (STAT 145)	Introduction to Statistics	3
STAT 345	Elements of Mathematical Statistics and Prob.	3
STAT 427	Advanced Data Analysis I	3
(Or substitution approved by faculty advisors)		

6. Successful completion of at least **one** course from each of the following three clusters or faculty approved substitution:

A. Individual (Genes/Physiology) Cluster Course

BIOL 401	T: Microbial Genetics	3/4
BIOL 435	Animal Physiology	3
BIOL 436L	Phylogenetics (Catalog 2017-18 only)	4
BIOL 437	Evolutionary Genetics (Catalog 2017-18 only)	3
BIOL 460	Microbial Physiology (Catalog 2017-19 only)	3
BIOL 471/571	Plant Physiological Ecology*	3
BIOL 478L	Plant Physiology (Catalog 2017-18 only)	4

B. Population (Behavior/Population Biology) Cluster Course

BIOL 409	T: Conservation Genetics	3
BIOL 409	T: Sexual Systems in Animals: Diversity & Ev.	3
BIOL 455	Ethology: Animal Behavior	3
BIOL 491/591	Population Genetics*	3
ANTH 360	Human Behavioral Ecology	3
ANTH 363	Primate Social Behavior	3
ANTH 491	Population Genetics	3

C. Community/Ecosystem Cluster Course

BIOL 405/505	Ecosystem Dynamics*	3
BIOL 409	T: Ecology of Plant Microbe Symbiosis	3
BIOL 419	T: Global Change Biology (Catalog 2017-18 only)	3
BIOL 451	Microbial Ecology (Catalog 2017-18 only)	3
BIOL 475	Community Ecology (Catalog 2017-18 only)	3
BIOL 495	Limnology (Catalog 2017-18 only)	3

BIOL 495	Limnology	3
BIOL 511	Macroecology*	3
BIOL 514/535	Ecosystem Studies*/Freshwater Ecosystems	3

7. **One** demonstration of significant hands-on experience in the field or research laboratory.

BIOL 400	Senior Honor's Thesis	Varies
BIOL 408L	Bosque Internship	3
BIOL 409	T: Ornithological Field Expedition	4
BIOL 461L	Introduction to Tropical Biology	3
BIOL 463L	Flora of New Mexico	4
BIOL 496L	Limnology w/ Laboratory (Catalog 2017-18 only)	1
BIOL 499	Undergraduate Problems	1
PSY 465L	Gorilla Observation Laboratory	3
● Successful completion of an approved field course at UNM or anotherinstitution		
● Participation in an NSF REU program at UNM or another institution		
● Another field experience with prior approval by faculty advisors		

8. Successful completion of **one** interdisciplinary synthetic course or faculty approved substitution:

BIOL 324L	Natural History of the Southwest	4
BIOL 379	Conservation Biology	3
BIOL 419	Topics in Interdisciplinary Science	3/4
BIOL 445/545	Biology of Toxins*	3
BIOL 490	Biology of Infectious Organisms	3
BIOL 492/592	Introduction to Mathematical Biology*	3
BIOL 494	Biogeography	3
BIOL 495	Limnology	3

BIOL 535	Freshwater Ecosystems (F17-18)	3
BIOL 558	Geomicrobiology (F17-18)	3
ANTH 350	Human Biology	3
ANTH 357	Human Origins	3
BIOC 423	Introductory Biochemistry	3
EPS 352/439	Global Climate Change/Paleoclimatology	3

9. Successful completion of at least **one** semester of "Brown Bag" seminar:

BIOL 402	T: Brown Bag Seminar	1-2

10. Successful completion of additional **Biology (BIOL) courses** so that the total number of Biology credit hours is greater than or equal to **48** hours for the Bachelor of Science.

11. Successful completion of supportive courses in Math, Physics, and Chemistry:

MATH	1430/1440	**OR**	MATH	1512/1522	6-8
PHYS	1230/1240	**OR**	PHYS	1310/1320	6
CHEM	1215/1215L	**AND**	CHEM	1225/1225L	8
PLUS one semester Organic Chemistry with Lab (CHEM 301/303L) or CHEM 2120 (4)					

*Graduate courses require approval from faculty & the College of Arts and Sciences Advisement Center for undergraduate enrollment

THE UNIVERSITY OF NEW MEXICO

Plan of Study for BS degree in Biology with Concentration in EEOB

(Please list course and semester completed)

Name:	UNM ID#:	Email: @unm.edu

1. Four-course introductory Biology sequence

		Date of Completion
BIOL 2110C	Cell & Molecular Biology	
BIOL 2410C	Genetics	
BIOL 303/303L	Ecology & Evolution	
BIOL 304/304L	Plant & Animal Form & Function	

2. Successful completion of upper-division courses in **both** Ecology & Evolution

		Date of Completion
BIOL 300	Evolution	
BIOL 310 (or 409)	T: Principles of Ecology	

3. Successful completion of at least **one** taxonomic based course

Course	Date of Completion

4. Successful completion of at least **one** synthetic/comparative taxonomic based course and lab

Course	Date of Completion

5. Successful completion of at least **one** statistics course

Course	Date of Completion

6. Successful completion of at least **one** course from each of the three clusters (A,B,C)

Course	Date of Completion
A.	
B.	
C.	

7. **One** demonstration of significant hands-on experience in the field or research laboratory

Course	Date of Completion

8. Successful completion of at least **one** interdisciplinary synthetic course

Course	Date of Completion

9. Successful completion of at least **one** semester of “Brown Bag” seminar

Course	Date of Completion

10. Additional BIOL courses to reach a total of 48 for the BS

Course	Date of Completion

11. Successful completion of supportive courses in Math, Physics, and Chemistry

Subject	Course	Date of Completion
Math		
Physics		
Chemistry	CHEM 1215/1215L	
	CHEM 1225/1225L	
	CHEM 301/303L or CHEM 2120	

Signatures:

Student Date

A&S Undergraduate Advisor- Biology Date

EEOB Faculty Advisor Date

(Updated 7/19/2021)