WFCB Bachelors of Science (BS) Requirements+

Wildlife, Fish, and Conservation Biology (WFCB) is an ecologically oriented major that addresses the interactions of humans with animals in both natural and disturbed environments. Students are trained in the basic sciences, mathematics, and the biology and conservation of vertebrates in California and in many other parts of the world. The emphasis on basic sciences provides our students with the intellectual flexibility to handle the varied and often unexpected problems faced by biologists in the field and laboratory. It also makes sure students are prepared for graduate and professional schools and for alternative careers.

Preparatory Subject Matter Requirements (2023–2024)

Preparatory Subject Matter	(57-59 Units)	Quarter(s) Offered***	Units	Completed	Notes
Written Expression					
University Writing Program 1	Expository Writing	I, II, III, IV	4		
Oral Expression					
Communication 1	Introduction to Public Speaking	I, II, III, IV	4		
Chemistry					
Chemistry 2A	General Chemistry	I, II, IV	5		
Chemistry 2B	General Chemistry	II, III, IV	5		
Chemistry 8A	Organic Chemistry	I, III, IV	2		
Biological Sciences					
BIS 2A	Introductory Biology	I, II, III, IV	5		
BIS 2B	Introductory Biology	I, II, III, IV	5		
BIS 2C	Introductory Biology	I, II, III, IV	5		
Mathematics					
Mathematics 17A	Short Calculus	I, II, III, IV	3		
Mathematics 17B	Short Calculus	I, II, III, IV	3		
Physics					
Physics 1A	Principles of Physics	I, II	3		
Physics 1B	Principles of Physics	II, III	3		
Statistics *(Choose one of the following)*					
WFC 103	Applied Statistics for Wildlife Research	II	4		
Statistics 100	Applied Statistics for Bio Sciences	I, II, III, IV	4		
Plant Sciences 120	Applied Statistics in Ag Science	I	4		
Data Literacy					
WFC 098	Data Literacy for Wildlife Biologists	I	3		
Wildlife & Conservation *(Choose one of the following)*					
WFC 10	Wildlife Ecology and Conservation	I, III	4		
WFC 50	Natural History of CA Vertebrates	II	3		

+This checklist is to be used for guidance purposes. Other courses may be listed in course catalog that are not shown here due to them being offered irregularly.
I = fall quarter, II = winter quarter, III = spring quarter, IV = summer session
***Course offerings are subject to change. Check with your adviser for the most updated listings.

Depth Subject Matter Requirements

NOTE: Students graduating with this major are required to attain at least a C average (2.0 GPA) in all courses taken at the university in Depth Subject Matter and Area of Specialization *and* pass all coursework. See requirements of the College in the UCD General Catalog.

Depth Subject Matter (45-50 Units)		Prerequisites	Qtr(s)	Units	Completed
Ecology *(Choose one of the following)*					
ESP 100	General Ecology	BIS 2A-C; MAT 16A-B; STA 13 recommended	I, II, IV	4	
EVE 101	Introduction to Ecology	BIS 2A-C; MAT 16A-B (or equiv.)	I, II, III, IV	4	
Evolution					
EVE 100	Introduction to Evolution	BIS 2ABC, MAT 16AB or 17AB or 21AB, STA 100 recommended	I, II, III, IV	4	
Physiology					
WFC 130	Physiological Ecology	EVE 101 or ESP 100 or equivalent	II	4	
Animal Behavior *(Choose one of the following)*					
NPB 102	Animal Behavior	BIS 2A-C	I, II, III, IV	3	
WFC 141	Behavioral Ecology	EVE 101 or ESP 100 or equivalent	III	4	
Conservation Biology					
WFC 154	Conservation Biology	BIS 2B or equivalent	II	4	
Population Biology *(Choose one of the following)*					
WFC 122	Population Dynamics and Estimation	MAT16A-B; STA13 or equiv; EVE 101, ESP 100, or equiv	III	4	
WFC 124[††]	Sampling Animal Populations	ESP 100 or EVE 101; WFC 103 or STA 100 or PLS 120	TBA	4	
Organismal Core *(Choose 3 lecture courses and 2 laboratory courses)*					
WFC 110	Biology & Conservation of Wild Mammals	BIS 2A-C; EVE 101 or ESP 100 or equivalent	III	3	
WFC 110L	Lab in Biology & Conservation of Wild Mammals	WFC 110 (may be concurrent); consent of instructor	III	3	
WFC 111	Biology & Conservation of Wild Birds	BIS 2A-C, upper division ecology recommended	I	3	
WFC 111L	Lab in Biology & Conservation of Wild Birds	WFC 111 (may be concurrent); consent of instructor	I	3	
WFC 120	Biology & Conservation of Fishes	BIS 2ABC, upper division ecology recommended	I	3	
WFC 120L	Lab in Biology & Cons of Fishes	WFC 120 (may be concurrent)	I	2	
WFC 134	Herpetology	BIS 2ABC, upper division ecology recommended	II	3	
WFC 134L	Herpetology Laboratory	WFC 134 concurrently	II	3	
Research Methods *(Choose one of the following)*					
WFC 100	Field Methods in Wildlife, Fish, & Cons. Bio	BIS 2ABC, EVE 101 or ESP 100	III	4	
WFC 101/L[even]	Field Research in Wildlife Ecology + Lab	Consent of instructor; ESP 100 or EVE 101; WFC 103 or STA 100 or PLS 120; WFC 110 or WFC 111 or WFC 134	I	2/4	
WFC 102/L[odd]	Field Research in Fish Ecology + Lab	Consent of instructor; ESP 100 or EVE 101; WFC 103 or STA 100 or PLS 120; WFC 120; one aquatic biology course	III	1/6	
GIS Technology *(Strongly recommended, but not required)*					
ABT/LDA 150	Geographic Info Systems	PLS 21 or equivalent with consent of instructor	I	4	
Anatomy *(Strongly recommended, but not required)*					
APC 100	Comparative Organology of Vertebrates	BIS 2A-B	II	4	
Statistics *(Strongly recommended, but not required)*					
STA 104 [odd]	Nonparametric Statistics	STA 13, 32, or 100	II	4	
STA 106	Analysis of Variance	STA 13, 32, or 100	I, II, IV	4	
STA 108	Regression Analysis	STA 13, 32, or 100	I, II, III, IV	4	

[odd] Course is offered in odd years only (2017, 2019, etc.); [even] Course is offered in even years only (2018, 2020, etc.)
* Complete a major modification petition to use this course until its addition is formally recognized by campus.
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[††] Future availability unknown

Wildlife Health

Required Courses		Prerequisites	Qtr(s)	Units	Completed
Complete Wildlife Ecology *(Choose one of the following)*					
WFC 151	Wildlife Ecology	BIS 2B	I	4	
WFC 168	Climate Change Ecology	BIS 2B	II	4	
Complete either BIS 102/103 or ABI 102/103					
BIS 102	Structure & Function of Biomolecules	BIS 2A; CHE 8B, 118B, or 128B	I, II, III, IV	3	
BIS 103	Bioenergetics & Metabolism	BIS 102	I, II, III, IV	3	
ABI 102	Animal Biochemistry & Metabolism	CHE 2A-B; CHE 8A-B or CHE 118A-B	I	5	
ABI 103	Animal Biochemistry & Metabolism	ABI 102	II	5	
Choose one Wildlife course					
Note: A course cannot be used to simultaneously satisfy a depth and area of specialization requirement.					
WFC 110	Biology & Conservation of Wild Mammals	BIS 2A-C; EVE 101 or ESP 100 or equivalent	III	3	
WFC 111	Biology & Conservation of Wild Birds	BIS 2ABC, upper division ecology recommended	I	3	
WFC 120	Biology & Conservation of Fishes	BIS 2ABC, upper division ecology recommended	I	3	
WFC 122[††]	Population Dynamics and Estimation	MAT16A-B; STA13 or equiv; EVE 101, ESP 100, or equiv	III	4	
WFC 124	Sampling Animal Populations	ESP 100 or EVE 101; WFC 103 or STA 100 or PLS 120	TBA	4	
WFC 125 [even]	Tropical Ecology and Conservation	ESP 100 or EVE 101 or equivalent	I	4	
WFC 134	Herpetology	BIS 2ABC, upper division ecology recommended	II	3	
WFC 136 [even]	Ecology of Waterfowl & Game Birds	WFC 111, 111L, or equivalent, or consent of instructor	II	3	
WFC 137* [even]	Applied Fisheries Conservation	WFC 120/L or WFC 110/L or WFC 111/L or WFC 134/L	III	3	
WFC 141	Behavioral Ecology	ESP 100 or EVE 101 or equivalent	III	4	
WFC 152 [odd]	Ecology of Human-Wildlife Conflicts	BIS 002B; Or equivalent	II	3	
WFC 155	Wildlife Space Use & Habitat Conservation	ESP 100 or EVE 101	I	4	
WFC 168	Climate Change Ecology	BIS 2B	II	4	
WFC 198 [even]	Freshwater Ecology	BIS 2C or equivalent	III	3	
WFC 198	Wetland Ecology	BIS 2C or equivalent	II	4	
Choose one General course					
APC 100	Comparative Organology of Vertebrates	BIS 2A-B	I	4	
ANS 100	Animal Physiology	BIS 2A; CHE 2B	III	5	
ANS 103	Animal Welfare	ANS 104 or NPB 102 or WFC 141	I	4	
ANS 104	Principles of Domestic Animal Behavior	ANS 2 or BIS 2B	I	4	
ANS 170	Ethics of Animal Use	Any basic course in composition or speech	III	4	
MCB 150	Developmental Biology	BIS 101	II	4	
MIC 101	Introductory Microbiology	BIS 2A, CHE 2B	II	5	
MIC 102	Introductory Microbiology	BIS 2A, CHE 2B	I, II, III	3	
and MIC 103L or MIC 104L[1]					
NPB 101	Systemic Physiology	BIS 2A and CHE 2B, PHY 1B or 7C strongly recommended	I, II, III, IV	5	
NPB 140	Principles of Environmental Physiology	NPB 101; BIS 102 recommended	II	3	
VME 158 [even]	Infectious Diseases in Ecology & Conservation	EVE 101 or ESP 100	II	3	

This AOS also recommends extra preparatory courses; pre-requisites for admission into Veterinary Medicine vary among schools and students should confirm the specific requirements of the schools to which they wish to apply. We recommend that the following additional courses be considered:

BIS 101	Genes and Gene Expression	
CHE 2C	General Chemistry	
CHE 118A-C	Organic Chemistry for Health & Life Sciences	*Note: Some schools may accept CHE 8A-B; individual schools will vary*
PHY 7A-C	General Physics	*Note: some schools may accept PHY 1A-B; individual schools will vary*

[1]	MIC 103L	Introductory Microbiology Laboratory	MIC 102 C- or better; CHE 002B	I, II, III	2
	MIC 104L	General Microbiology Laboratory	MIC 102 C- or better; CHE 8B or equivalent	I, II	3

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