### Animal Behavior, Ecology, and Conservation - ABEC

<table>
<thead>
<tr>
<th>Course Number</th>
<th>Course Title</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisites</th>
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<tbody>
<tr>
<td>ABEC 101</td>
<td>Introductory Animal Behavior I</td>
<td>3</td>
<td>This course covers a broad overview of animal behavior, from the ideas and theories that have shaped the field to basic approaches used to study behavior. We will discuss behavior from a variety of animals, ranging from insects to mammals (including humans!). Special attention will be given to examining the research that shapes the field. Offered: every fall.</td>
<td>ABEC 101 &amp; ABEC 102. Corequisite: ABEC 220L.</td>
<td></td>
<td>ABEC majors only.</td>
<td>every fall</td>
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<tr>
<td>ABEC 102</td>
<td>Introductory Animal Behavior II</td>
<td>3</td>
<td>Foundational evolutionary and ecological theories in Animal Behavior. Explore key behaviors that lead to an animal’s survival including foraging, mating, habitat selection, and social behavior as well as methods to study animal behavior. Also compare animal behavior in the news to the scientific literature. Offered: every spring.</td>
<td>ABEC 101 &amp; ABEC 102. Corequisite: ABEC 220.</td>
<td></td>
<td>ABEC 220L</td>
<td>every spring</td>
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<tr>
<td>ABEC 220L</td>
<td>Animal Learning Lab</td>
<td>1</td>
<td>Required animal learning lab that emphasizes practical animal training. Prerequisites: ABEC 101 &amp; ABEC 102. Corequisite: ABEC 220. Offered: every spring.</td>
<td>ABEC 101 &amp; ABEC 102. Corequisite: ABEC 220.</td>
<td></td>
<td>ABEC 220L</td>
<td>every spring</td>
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<tr>
<td>ABEC 250</td>
<td>Zoo Animal Husbandry</td>
<td>1</td>
<td>Topics in animal husbandry in the zoo setting. Focus is on the specific needs of different taxonomic groups, environmental management, veterinary monitoring, nutrition, and programming. Prerequisites: ABEC 101 &amp; ABEC 102. Offered: Spring of odd-numbered years.</td>
<td>ABEC 101 &amp; ABEC 102. Corequisite: ABEC 220.</td>
<td></td>
<td>ABEC 250</td>
<td>Spring of odd-numbered years</td>
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<tr>
<td>ABEC 251</td>
<td>Zoo Animal Management</td>
<td>3</td>
<td>Modern practices in zoo mission implementation. Focus on managing many facets of zoos: individual animals, populations of animals, visitors, research, education, staff, and budgets. The course is highly project-based and involves considerable group work and participation. Prerequisites: ABEC 101 &amp; ABEC 102. Offered: every spring.</td>
<td>ABEC 101 &amp; ABEC 102. Corequisite: ABEC 220.</td>
<td></td>
<td>ABEC 250</td>
<td>every spring</td>
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<tr>
<td>ABEC 300</td>
<td>Research Participation (no credit)</td>
<td>0</td>
<td>Recognition for ABEC research assistants, does not carry and credits. Restriction: permission of instructor. Offered: every semester.</td>
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<td></td>
<td>ABEC majors only.</td>
<td>every semester</td>
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<tr>
<td>ABEC 301</td>
<td>Research Participation (credit)</td>
<td>1</td>
<td>Recognition for ABEC research assistants. Can be taken up to 3 times for major elective credit; more than three times credit is free-elective. Restriction: permission of instructor. Offered: every semester.</td>
<td></td>
<td></td>
<td>ABEC majors only.</td>
<td>every semester</td>
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### ABEC 302 Photographing Animal Behavior - 1 Credit
This one-credit course will focus on the use of photography in portraying animal behavior, and in educating the public about animals, and promoting animal welfare/conservation messages. In this course the student will: acquire skills at capturing-depicting the nature and behavior of animals in still images; develop skills at using the images of animals in conveying messages; acquire technical skills associated with the operation of high-end digital, SLR cameras; acquire skills at image post-processing. Additional fee required. Restriction: ABEC majors only. Offered: occasional springs.

### ABEC 303 Shelter Behavior - 1 Credit
This course will expose students to a variety of animal sheltering models. Students will assess the impacts of each type of model on the behavior of shelter animals and prospective adopters. Students will also take an in-depth look at why so many animals are relinquished to shelters and at the programs shelters have established to help keep pets in their homes. Prerequisites: ABEC 101 and ABEC 102. Offered: every fall.

### ABEC 305 Assessing Animals - 3 Credits
Assessing Animals will focus on applied behavioral analysis of non-human animals through various methodologies including functional assessments. Students will learn how to use such assessments to achieve behavioral goals through problem solving strategies for non-human animals. Occasional (1-2) weekend days may be required. Prerequisites: ABEC 101 and ABEC 102. Offered: every fall.

### ABEC 319 Anthrozoology - 3 Credits
An engagement with the fundamental issues of the field of Anthrozoology by evaluating the history of human/ nonhuman interactions, the categories into which humans have sorted animals, and a variety of science-based and value-based approaches to humans’ inevitable intersection with other living beings. Prerequisite: ABEC 101 & ABEC 102 or ABEC 215. Offered: every spring.

### ABEC 332 Animal Welfare - 3 Credits
This course will examine critical debates and controversies surrounding our care and use of animals. We will use a case study approach, and use scientific research to evaluate real world issues in animal welfare. The case studies will cover companion animals, wildlife, zoo animals, and animals used in agriculture and research. This course involves significant writing. Prerequisite: ABEC 101 & ABEC 102. Restriction: juniors and seniors only. Fulfills College Core: Advanced Writing-Intensive Offered: every spring.

### ABEC 333 Conservation Behavior - 3 Credits
How human activity has altered the planet and how those modifications affect the behavior of animals. Review of key principles through the lens of Behavioral Ecology in regards to species requirements for survival, major threats to species existence, and conservation solutions to reduce those threats. Identification of positive human behavior for conservation outcomes. Prerequisites: ABEC 101 & ABEC 102. Offered: every fall.

### ABEC 335 Conservation Education - 3 Credits
Applying the theories and principles of conservation psychology to education in informal settings (zoos, aquariums, wildlife refuge). Assessing attitude and behavioral outcomes of conservatvin education programs. Prerequisites: ABEC 101 & ABEC 102. Restriction: juniors and seniors only. Offered: most fall semesters.
ABEC 336 Child Animal Studies 3 Credits
This course considers how animals play distinct roles in child development, children’s cultures, and even in the social construction of ‘childhood.’ It draws upon psychology, ethnology, ethics, cultural studies, education, and anthropology.
Prerequisites: ABEC 101 & ABEC 102. Restriction: juniors and seniors only. Offered: spring of odd-numbered years.

ABEC 339 Animal Enrichment 3 Credits
This course emphasizes the role of enrichment in various contexts (laboratory, shelter, and zoo). Multiple opportunities to design and implement enrichment are provided. The course uses the S-P-I-D-E-R framework for enrichment design and effectiveness.
Prerequisites: ABEC 101 & ABEC 102. Offered: spring of even-numbered years.

ABEC 341 Urban Ecology 3 Credits
Critical examination of the natural ecosystems in which cities are embedded, from soil and vegetation to biodiversity and landscape scale processes. Investigations into how cities are both centers of human production and consumption that shape global ecologies as well as areas of critical habitat for nonhuman animals, with an aim to understand and promote coexistence.
Prerequisites: ABEC 101 & ABEC 102. Offered: fall of even-numbered years.

ABEC 341L Urban Ecology Lab 1 Credit
Using Buffalo as a natural laboratory, visit urban sites of varying characteristics to analyze the effects of different types of urban development and management on ecosystems. Speak to local managers, collect and analyze ecological data, observe urban impacts to wildlife and ecosystems, as well as the connection between social and ecological systems in Buffalo.
Prerequisites: ABEC 101 & ABEC 102. Corequisite: ABEC 341. Offered: fall of even-numbered years.

ABEC 342 Animal Geographies 3 Credits
Study of the entanglements of human-animal relations with space, place, location, environment and landscape.
Prerequisites: ABEC 101 & ABEC 102. Restriction: juniors and seniors only. Offered: spring of even-numbered years.

ABEC 351 Zoo Exhibitory 1 Credit
Critical evaluation of zoo design principles. Involves travel to obtain first-hand study of distant zoological institutions. Additional fee required. Cost varies based on destination, but generally are between $200 and $350. Please contact the course instructor for current fees.
Prerequisites: ABEC 101 & ABEC 102. Offered: annually.

ABEC 360 Observational Research Methods 4 Credits
Study of the principal procedures used in animal behavior research. Involves the conduct of independent research project, from formulation of hypothesis through to presentation of results. Statistical analysis of data is a key component of the class, and students are expected to have completed their statistics requirement.
Prerequisites: ABEC 101, ABEC 102, & one of the following: MAT 131, MAT 141, or PSY 201. Restriction: juniors and seniors only. Fulfills College Core: Advanced Writing-Intensive Offered: spring of odd-numbered years.

ABEC 363 Canine Evolution, Behavior and Cognition 3 Credits
Introduction to the latest theories regarding how dogs evolved and were domesticated; how dogs communicate with humans and with each other, exposure to ground-breaking research into dog behavior, learning, cooperation, and cognition.
Prerequisites: ABEC 101 & ABEC 102. Restriction: juniors and seniors only. Offered: every spring.

ABEC 370 Animal Cognition 3 Credits
This course will critically examine the mental lives of animals. We will attempt to better understand what animals are thinking and how and why they make particular decisions. The emphasis of this course is on critically evaluating research claiming to demonstrate or refute the presence of cognitive abilities across species. Topics studied will include perception, tool use, communication, emotions, and many more.
Prerequisite: ABEC 101 & ABEC 102. Offered: every spring.

ABEC 403 Tropical Ecology 1 Credit
Students will travel to tropical areas in Central or South America over Spring Break to learn tropical ecology first hand. The course will take students to both cloud forest and lowland rainforest ecosystems. Students will complete readings and mini-projects while in the field. Additional fee required and varies with location (generally about $2500) which covers all travel costs. Please contact the course instructor for current fees.
Prerequisites: ABEC 101 or ABEC 102. Offered: most springs.

ABEC 404 Wildlife Ecology and Conservation in Africa 3 Credits
Field experience in Africa, emphasizing field methods for animal observation, community-based conservation, and wildlife behavior and management. This course involves early application (previous fall), AND travel during summer. Additional fee required. Please contact the course instructor for current fees.
Prerequisite: ABEC 101 & ABEC 102. Fulfills College Core: Core Capstone, (part of the Global Citizenship Core Pathway), (part of the Sustainability Core Pathway) Offered: every spring.

ABEC 405 Field Studies in Political Ecology & Wildlife Conservation 3 Credits
This field course provides an in-depth look at the complex sociocultural and political aspects of wildlife conservation and environmental sustainability by immersing students in research, workshops, readings, and discussions with local community groups and conservation experts in Costa Rica. We will travel to the capital of San Jose, where we will meet with professors working at University for Peace, to learn about some of the history around conservation, indigenous peoples, and sustainability in Costa Rica. We will also learn about current work being done at the national and local level in areas of environmental education and community advocacy. We will then travel to Santa Elena to spend five days engaged in wildlife tours, participating in education workshops, and hearing from guest speakers about re-wilding projects, river protection, sustainable farming, and new ecotourism programs. Finally, we will travel to the beautiful coastal town of Manuel Antonio to stay and volunteer with Kids Saving the Rainforest, a non-profit organization dedicated to wildlife rehabilitation, environmental education, and conservation of wildlife. We will work with the public in small research projects at Manuel Antonio National Park to learn about human-wildlife interactions there. Additional fee required. Please contact the course instructor for current fees.
Prerequisites: ABEC 101 & ABEC 102. Offered: fall of odd-numbered years.
ABEC 490 Canisius Ambassadors for Conservation 4 Credits
Field study of endangered species and ecology, followed by educational outreach to school and public audiences.
Prerequisites: ABEC 101 & ABEC 102.
Offered: every semester.

ABEC 491 Internship 1 3 Credits
Internship in animal-related setting. Joint supervision by faculty and agency personnel. Application of classroom lessons to real-world situations.
Students should register for the section most closely related to the internship activities. Section A is Anthrozoology, Section B is Animal Behavior, Section C is Conservation, and Section Z is Zoo Biology.
Prerequisites: ABEC 101 and 102, junior or senior standing, minimum GPA of 2.0 in the major, a positive recommendation from a faculty member, & a completed & approved internship application.

ABEC 492 Internship 2 3 Credits
Internship in animal-related setting. Joint supervision by faculty and agency personnel. Application of classroom lessons to real-world situations.
Students should register for the section most closely related to the internship activities. Section A is Anthrozoology, Section B is Animal Behavior, Section C is Conservation, and Section Z is Zoo Biology.
Prerequisites: junior or senior standing, minimum GPA of 2.0 in the major, a positive recommendation from a faculty member, & a completed & approved internship application.

ABEC 495 Independent Research 3 Credits
Independent project conducted under the supervision of a faculty member.
Prerequisites: ABEC 101 & ABEC 102. Restriction: permission of instructor.