

**Zoo Science and Management
Course Syllabus Spring 2023**

Course Number: ENR 4360

Title: Zoo Science and Management.

Credit hrs: 2

Prerequisites: ENR 3300 (319), OR ENR 3600 (340), OR ENR 3611 (311), OR permission of instructor

Time and Place:

Lecture	Tues @ 6:30-8:30 pm	Kottman Hall 370
Laboratory	Sat* @ 9:00am – 12:00pm	Columbus Zoo and Aquarium

*alternating Saturdays

Supervising Instructor: Dr. Stanley D. Gehrt (gehart.1@osu.edu; 2-1930)
School of Environment and Natural Resources

Zoo Instructor: Danielle Ross, Vice President, Conservation Education and Engagement
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Teaching Assistant: Hayley Dougherty
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Associate Instructors:

Dan Beetem, Director, Animal Management, the Wilds
Shannon Borders, Assistant Curator, Heart of Africa
Becky Ellsworth, Curator, Shores Region
Adam Felts, Senior Curator, Heart of Africa/Asia Quest Regions
James Gentzel, Animal Programs Specialist
Dana Hatcher, Animal Nutrition Manager
Karen Huebel, Director, Theming and Interpretive Design
Randy Junge, DVM, Vice President, Animal Health
Mike Kreger, PhD, Vice President, Conservation and Sustainability
Katrina McCauley, Assistant Curator, Australia and the Islands Region
Laura McGlothlin, Assistant Curator, Asia Quest Region
Audra Meinelt, Assistant Curator, Congo Expedition
Jan Ramer, DVM, Senior Vice President, Animal Care and Conservation
Shelly Roach, Registrar
Anthony Sabo, Vice President, Water Park Operations and Guest Services
Tom Schmid, President and CEO
Nikki Smith, Curator, North America Region

COURSE DESCRIPTION:

2 credits

This course is a collaboration between the School of Environment and Natural Resources and the Columbus Zoo and Aquarium, and provides students a unique opportunity to combine formal coursework with first-hand experience with zoo/aquarium professionals associated with a world-renowned zoo/aquarium. This course introduces students to the different elements involved with zoo science and management. Leading zoos are involved in setting and meeting the highest standards for animal care and exhibition, zoo-based education and research programs, national and international training programs, and field-based research and conservation activities. Zoo professionals must participate in international partnerships focused on wildlife management, science and conservation around the world. Great zoos also educate and inspire visitors, and allow visitors to see animals and their behaviors they might never see in the wild. Thus, zoos have the potential to shape public opinion regarding the value of wildlife and their habitats. Students will become familiar with the concepts and challenges associated with these biological, educational, ethical, and administrative aspects of zoo science through lecture and practical experience. This course will be of interest for students interested in careers as a zoo or wildlife park curator, conservationist focused on rare species, environmental educator, or a leader in international wildlife management programs.

COURSE OBJECTIVES:

Develop familiarity with conceptual and practical elements of operating and managing a zoo, including: 1) Identify and use the biological concepts, principles, and theories that constitute the foundation of managing captive wildlife, 2) employ techniques central to wildlife husbandry, including animal growth, development, behavior and welfare, 3) develop a familiarity with areas of specialization in zoo science and additional qualifications that are required in seeking careers in those fields, 4) employ zoo science terminology accurately, 5) describe ethical challenges in the management and research of captive animals.

TEXT (NOT REQUIRED, OPTIONAL):

An Introduction to Zoo Biology and Management, Paul A. Rees, published in 2011 by Wiley-Blackwell publishing 432 pp.

Building a Future for Wildlife: the World Zoo and Aquarium Conservation Strategy, published by the World Association of Zoos and Aquariums (WAZA, 2005). This document outlines the role of zoos in wildlife conservation with a focus on both responsibilities and opportunities unique to zoological institutions.

Additional optional text: *“Why Zoos & Aquariums Matter: Assessing the Impact of a Visit to a Zoo or Aquarium.”* (co-authored by SENR faculty, Dr. Joe Heimlich)

COURSE FORMAT:

Classes will be held at OSU and at the Columbus Zoo, and zoo professionals will serve as instructors for classroom lectures as well as ‘fieldwork’ behind the scenes at the zoo. The class is held on Tuesday evenings on campus and at the Zoo on alternate Saturdays during spring semester. Students will be expected to arrange transportation to the Zoo for Saturday classes.

GRADING POLICY: The class is letter-graded, based on the following breakdown:

1. Attendance and Participation – 20%
2. Student Journals – 20%
3. Quizzes (given at the beginning of each class) – 25%
4. Zoo Project – 35%

Grading A 90-100; B 80-89; C 70-79; D 60-69; E < 60. Plus/minus grading applied to the following overlap ranges (88-92; 78-82; 68-72; 58-62).

Students will be expected to maintain a journal throughout the course. These journals should contain observations and notes from lectures and facility tours, impressions of the class and the information that is presented. Student journals will provide valuable feedback to the instructors and to zoo staff about the quality of the course and will be returned to the students for future reference after a grade has been assigned. Quizzes will be short, 4-5 questions, delivered at the beginning of each class. A zoo project will constitute a major portion of the grade. Students will work in groups on this project throughout the semester. The plan will incorporate different concepts and subject areas that are covered in class. The final examination will consist of an oral presentation to the zoo instructors.

Weather or Other Short-Term Closing: Should in-person classes be canceled, I will notify you as to which alternative methods of teaching will be offered to ensure continuity of instruction for this class. Communication will be via CarmenCanvas and/or email.

SPECIAL NEEDS:

Students with disabilities who need accommodations should contact Dr. Gehrt at the telephone number or email address above to make arrangements. Special needs must be discussed and arrangements made well in advance (preferably prior to the start of class) of when they are required. Special accommodations may be arranged through the OSU Office of Disability Service, 150 Pomerene Hall, 1760 Neil Ave., Phone – 292-3307, website - <http://www.ods.ohio-state.edu/>

ACADEMIC MISCONDUCT STATEMENT

Academic misconduct as defined by the university (Faculty Rule 3335-31-02) will not be tolerated. Submitting plagiarized work to meet academic requirements including the

representation of another's work or ideas as one's own; the unacknowledged word for word use of another person's ideas; and/or the falsification, fabrication, or dishonesty in reporting research results shall be grounds for charges of academic misconduct and will be assigned a grade of E.

Health and safety requirements: All students, faculty and staff are required to comply with and stay up to date on all university safety and health guidance (<https://safeandhealthy.osu.edu>), which includes wearing a face mask in any indoor space and maintaining a safe physical distance at all times. Non-compliance will result in a warning first, and disciplinary actions will be taken for repeated offenses.”

Disability Accommodations: The university strives to make all learning experiences as accessible as possible. In light of the current pandemic, students seeking to request COVID-related accommodations may do so through the university's request process, managed by Student Life Disability Services. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: slds@osu.edu; 614-292-3307; slds.osu.edu; 098 Baker Hall, 113 W. 12th Avenue.

Counseling and Consultation Services/Mental Health: As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life Counseling and Consultation Services (CCS) by visiting ccs.osu.edu or calling (614) 292- 5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on-call counselor when CCS is closed at (614) 292-5766 and 24 hour emergency help is also available through the 24/7 National Prevention Hotline at 1-(800)-273-TALK or at suicidepreventionlifeline.org.

David Wirt, wirt.9@osu.edu, is the CFAES embedded mental health counselor. He is available for new consultations and to establish routine care. To schedule with David, please call 614-292-5766. Students should mention their affiliation with CFAES when setting up a phone screening.

Religious Accommodations: Our inclusive environment allows for religious expression. Students requesting accommodations based on faith, religious or a spiritual belief system in regard to examinations, other academic requirements or absences, are required to provide the instructor with written notice of specific dates for which the student requests alternative accommodations at the earliest possible date. For more information about religious accommodations at Ohio State, visit odi.osu.edu/religious-accommodations.

Creating an environment free from harassment, discrimination, and sexual misconduct: The Ohio State University is committed to building and maintaining a community to reflect diversity and to improve opportunities for all. All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation.

To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Office of Institutional Equity:

1. Online reporting form at equity.osu.edu,
2. Call 614-247-5838 or TTY 614-688-8605,
3. Or Email equity@osu.edu

The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university employees have reporting responsibilities to the Office of Institutional Equity to ensure the university can take appropriate action:

All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately.

The following employees have an obligation to report all other forms of sexual misconduct as soon as practicable but at most within five workdays of becoming aware of such information: 1. Any human resource professional (HRP); 2. Anyone who supervises faculty, staff, students, or volunteers; 3. Chair/director; and 4. Faculty member.

This course adheres to The Principles of Community adopted by the College of Food, Agricultural, and Environmental Sciences. These principles are located on the Carmen

site for this course; and can also be found at <https://go.osu.edu/principlesofcommunity>. For additional information on Diversity, Equity, and Inclusion in CFAES, contact the CFAES Office for Diversity, Equity, and Inclusion (<https://equityandinclusion.cfaes.ohio-state.edu/>). If you have been a victim of or a witness to a bias incident, you can report it online and anonymously (if you choose) at <https://studentlife.osu.edu/bias/report-a-bias-incident.aspx>.

TOPICAL OUTLINE AND SCHEDULE

Times:

Tuesdays (at OSU, 370 KH) – 6:30 PM – 8:30 PM

Saturdays (at Zoo/Wilds) – 9:00 AM – 12:00 PM

Tuesday, January 10: (Gehrt & Huebel)

Course Expectations & Introduction

Define Course Project

Animal Exhibits – Design and Signage

Master Planning

Tuesday, January 17: (Kreger, Straka & Keller)

Internship experience

History of Zoos

Saturday, January 21: (Barnett & Ellsworth)

Animal Nutrition (ANIMAL NUTRITION)

Aquatic Exhibits (DISCOVERY REEF)

Tuesday, January 24: (Meinelt)

Species Management – Genetics and Demographics

Tuesday, January 31: (Roach & Flesch)

Animal Record Keeping & Regulations

Tuesday, February 7: (Smith & Stevens)

Introduction to Animal Training

Introduction to Animal Transport

Tuesday, February 14: (Borders)

Introduction to Animal Enrichment

Saturday, February 18: (Junge)

Animal Handling and Emergencies (ANIMAL HOSPITAL)

Tuesday, February 21: (Felts)

Animal Wellbeing

Saturday, February 25: (Felts)

Animal Wellbeing (HEART OF AFRICA)

Tuesday, February 28: (Jeskie, McNaughton & Massaroni)

Zookeeping

Saturday, March 4: (Borders, Smith & Stevens)

Animal Training (TBD)

Animal Enrichment (TBD)

Animal Transport (ASIA QUEST)

Tuesday, March 7: (Ramer)

Accreditation

Tuesday, March 14:

No Class – SPRING BREAK

Tuesday, March 21: (Ross)

Education in Zoos

Tuesday, March 28: (Sabo) AZA MID YEAR

Generating Revenue

Tuesday, April 4: (Kreger & Huebel)

Field Conservation

Group work time

Tuesday, April 11:

Group Work Time

Saturday, April 15: (Beetem) Arrive at Wilds @ 10AM/Depart Wilds @ 2PM

Research in Zoos and at the Wilds

Managing mixed species at the Wilds

Tuesday, April 18: (Schmid)

The Future of Zoos

Saturday, April 22: (All Instructors)

GROUP PRESENTATIONS AT THE ZOO

Group Project

Zoos regularly develop proposals for additions or changes to their current exhibit offerings. Such proposals include developing and prioritizing future acquisitions, particularly with respect to the Zoo's mission and goals. Early in the semester, we will assign students to groups of 5. Each group will work collaboratively on a group project. This year, we require each group to review the current exhibits at the Columbus Zoo & Aquarium, and identify a potential addition (species) to a specific region. After identifying and justifying a potential new animal, the group will develop a proposal keeping in mind all of the principles we cover in the class during the semester. Balancing the Zoo's conservation goals with revenue and guest experience, make (and justify) recommendations on adding this animal to current exhibit offerings. What are the benefits vs costs? Each group will present their proposal to zoo staff and the class at the end of the semester. The presentation will be the final exam for the class.