Cover Sheet: Request 12916

ZOO 4XXX Animal Behavior

Info

Process	Course|New|Ugrad/Pro
Status	Pending at PV - University Curriculum Committee (UCC)
Submitter	Nicole Gerlach ngerlach@ufl.edu
Created	8/9/2018 3:21:56 PM
Updated	6/5/2019 12:22:15 PM
Description of request	New course creation.

Actions

Step	Status	Group	User	Comment	Updated
Department	Approved	CLAS - Biology 011690003	Nicole Gerlach	Preliminary consult forms from Psychology and Wildlife Ecology & Conservation attached.	9/21/2018
uccconsult form Psychology.pdf uccconsult-Gerlach WEC.pdf					9/21/2018 9/21/2018
College	Conditionall Approved	CLAS - College of Liberal Arts and Sciences	Joseph Spillane	The College Curriculum Committee conditionally approves, with the following: 1) obtain a consult from the Animal Sciences program; 2) remove BSC2010/L as a prerequisite, since this course is the prereq for BSC2011/L;	10/26/2018
No document changes					
Department	Approved	CLAS - Biology 011690003	Nicole Gerlach	Animal Science consult form added and BSC2010 prereq removed, as requested.	6/5/2019
ZOO4XXX Animal Behavior Syllabus.docx uccconsult Animal Science.pdf					6/5/2019 6/5/2019
College	Approved	CLAS - College of Liberal Arts and Sciences	Joseph Spillane		6/5/2019
No document changes					
University Curriculum Committee	Pending	PV - University Curriculum Committee (UCC)			6/5/2019
No document changes					
Statewide Course Numbering System					
No document changes					
Office of the Registrar					
No document changes					
Student Academic Support System					
No document changes					
Catalog					
No document changes					

Step	Status	Group	User	Comment	Updated
College Notified					
No document changes					

Course|New for request 12916

Info

Request: ZOO 4XXX Animal Behavior
Description of request: New course creation.
Submitter: Nicole Gerlach ngerlach@ufl.edu
Created: 11/5/2018 4:02:19 PM
Form version: 2

Responses

Recommended Prefix ZOO
Course Level 4
Number XXX
Category of Instruction Advanced
Lab Code None
Course Title Animal Behavior
Transcript Title Animal Behavior
Degree Type Baccalaureate

Delivery Method(s) On-Campus
Co-Listing No
Co-Listing Explanation n/a
Effective Term Earliest Available
Effective Year Earliest Available
Rotating Topic? No
Repeatable Credit? No

Amount of Credit 3

S/U Only? No
Contact Type Regularly Scheduled
Weekly Contact Hours 3
Course Description The scientific study of the mechanistic and evolutionary causes of animal behavior. Topics include communication, foraging and anti-predator behavior, spatial behavior, aggressive behavior, mating behavior, parental care, and social behaviors.
Prerequisites BSC2011(C) & BSC2011L(C)
Co-requisites n/a
Rationale and Placement in Curriculum Behavior is one of the most important and interesting aspects of animal biology. This course exposes students to the broad field of animal behavior, from its historical foundations to current theories and evidence for a broad range of behavioral topics. Understanding animal behavior is a key part of the curriculum for any student interested in working with animals as part of their career, or in organismal biology more generally. This course would be of particular interest to students in the Zoology major, but would also be applicable for students from any major who are planning on attending veterinary school. This course would also provide a strong background to students who were interested in more applied uses of the scientific principles of behavior in an agricultural or wildlife management setting.

Furthermore, this course plays a key role in reinforcing some of the key goals of the biology curriculum. It focuses on how the science underlying our theoretical understanding of behavior is conducted, and how behavioral hypotheses at all levels of analysis can be tested experimentally. Students also participate in practical exercises to learn some fundamental techniques used to study behavior, and will practice reading and analyzing current scientific literature.
Course Objectives By the end of this course, students should be able to:
o Distinguish between the four types of questions that may be asked about animal behavior, and formulate hypotheses of each type to explain a given behavior.
o Explain how behavioral hypotheses are formulated, the procedures used to test them, and the types of data that can be collected.
o Describe some of the mechanisms involved in the production of a behavioral sequence by an

animal.
- o Explain the role of natural and sexual selection in the evolution of behavior.
- o Explain how these principles can be used to understand human behavior.

Course Textbook(s) and/or Other Assigned Reading Animal Behavior: Concepts, Methods, and Applications, 2e by Shawn E. Nordell & Thomas J. Valone. Oxford University Press (publisher), 2016.

Weekly Schedule of Topics Week # Lecture # Day Lecture Topic

1	1	M	
			Introduction to Animal Behavior
	2	W	
			Tinbergen's Four Questions
	3	F	
			Methods for Studying Behavior
2		M	
			MLK JR. DAY – NO CLASS
	4	W	
			Ultimate Causes – Selection I
	5	F	
			Ultimate Causes – Selection II
3	6	M	
			Ultimate Causes – Phylogenies
	7	W	Proximate Causes – Genetics
	8	F	Proximate Causes – Animal Personalities
4	9	M	
			Proximate Causes – Hormones
		W	
			EXAM I
	10	F	
			Proximate Causes – Neuro/Sensory I
5	11	M	Proximate Causes – Neuro/Sensory II
	12	W	Proximate Causes – Learning I
	13	F	Proximate Causes – Learning II
6	14	M	Communication I
	15	W	Communication II
	16	F	Communication III
7	17	M	Foraging
	18	W	Antipredator Behavior
	19	F	Introduction to Sexual Selection
8		M	EXAM II
	20	W	Intrasexual Selection
	21	F	Intersexual Selection I
9	22	M	Intersexual Selection II
	23	W	Mating systems I - Polygyny
	24	F	Mating systems II - Polyandry / Leks
10	25	M	Mating systems III - Monogamy and EPCs
	26	W	Parental care I
	27	F	Parental care II
11	28	M	Parental care III
		W	EXAM III
	29	F	Animal Navigation
12	30	M	Migration
	31	W	Dispersal
	32	F	Habitat Selection

13	33	M	Experiment Workshop
	34	W	Territoriality
	35	F	Intro to Game Theory
14	36	M	Aggression
	37	W	Dominance Hierarchies
	38	F	Sociality and Cooperation
15	39	M	

Kin Selection and Eusociality

	40	W	Cooperation and Altruism in Non-Relatives
FINALS			EXAM IV

Links and Policies VII. Course Policies

A. Time Commitment

The UF College of Liberal Arts and Sciences assumes that each student will devote 3-4 hours per week per credit-hour to each course during the regular semester. Because ZOO4XXX is 3 credits, each student should therefore expect to devote 9-12 hours per week to this course in a 15-week semester.

B. Attendance

Students are expected to attend all scheduled classes, and are responsible for all material presented in lecture, online, and in the assigned readings. Students who miss class are welcome to ask to borrow the notes of their classmates; the instructor will not be responsible for providing notes.

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:
https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx.

C. Exams

Students are expected to arrive on time; no extra time will be given for students who arrive late. Any material covered during the lecture period or assigned in the reading may be included in the lecture exams. This can include textbook illustrations, films, Powerpoint slides, and actual lectures. Take notes!

Make-up exams will only be available in cases of medical and/or family emergencies when documented by an accompanying letter from the Dean of Students, or for official academic activities (in which case the instructor should be contacted a minimum of two weeks in advance). The student must notify the instructor either ahead of time or within 24 hours of the missed exam, and the student is responsible for scheduling a timely make-up exam with the instructor. Make-up exams due to pre-arranged official academic activities may be scheduled prior to the in-class exam.

After the exam, I will post exam keys that highlight the salient points for which credit is awarded. Please contact me immediately if 1) your score is incorrectly summed, or 2) your posted score on Canvas does not agree with the score written on your exam. I will consider other re-grade requests on a case-by-case basis, however, I will not argue about point assignments. To request a re-grade, write a brief paragraph explaining why you believe your answer to a question was incorrectly scored, making specific reference to the posted key, and submit it after class or in office hours. Re-grade requests must be submitted within one week of the exam scores being posted.

D. Late Work

Assignments should be submitted by the assigned deadline. Late work will be subject to a 20% penalty for every day it is late, up to four days. For example, an assignment initially worth 10 points will be subject to a 2 point penalty if it is submitted up to 24 hours after the deadline, a 4 point penalty up to 48 hours, etc. Assignments may not be submitted more than four days after the assigned deadline without a notification from the Dean of Students documenting a medical/family emergency, as described above.

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Readings should be done in advance of class; you are expected to come ready to discuss the topics. Please be courteous to others during both lecture and lab, particularly during in-class discussions. Students exhibiting disruptive behavior in class will be asked to leave, with the subsequent loss of participation points for that day. Use of electronic devices in class to take notes or otherwise participate in classroom activities is approved, but all electronic devices should be set to silent mode before coming to class. Approved electronic devices are laptop computers, cell phones, smart phones, tablets, iPod touch, and voice recording devices. Other uses of these devices or the use of unapproved devices will be considered disruptive. Unapproved electronic devices include video

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If you need to talk to me outside of class time, please make an effort to attend posted office hours whenever possible. If you have a conflict with those hours, I am happy to make an appointment to meet you and address questions at a mutually agreeable time. However, I cannot meet with students on a drop in basis outside of office hours – please send me an e-mail to set up an appointment before stopping by!

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Correct grammar, punctuation, spelling, capitalization and paragraphing should be used in any college level submission, including exams and typed reports. I will take note of spelling and grammar and I will grade accordingly.

VIII. UF Policies

A. Academic Honesty

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In addition, on all work submitted for credit the following pledge is either required or implied: "On my honor I have neither given nor received unauthorized aid in doing this assignment."

Cases of plagiarism or other academic dishonesty will not be tolerated, and may result in assignment penalties, course grade penalties, and/or other sanctions. If you have knowledge of any instances of academic dishonesty in this class, please notify the instructor or contact the Student Honor Court (392-1631) or Cheating Hotline (392-6999). For additional information on Academic Honesty, please refer to the University of Florida Academic Honesty Guidelines at: https://catalog.ufl.edu/ugrad/current/advising/info/student-honor-code.aspx#honesty.

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D. Course Evaluations

. Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations (https://evaluations.ufl.edu) near the end of the semester; you will receive e-mail notifications of when the evaluations open. Summary results of these assessments are available to students at https://evaluations.ufl.edu/results/.

IX. Getting Help

A. Computing Problems

For issues with technical difficulties with Canvas, please contact the UF Help Desk at:

- Learning-support@ufl.edu
- (352) 392-HELP - select option 2
- https://lss.at.ufl.edu/help.shtml

It is each student's responsibility to check their LearningCatalytics gradebook in a timely fashion to be sure their submissions are being properly recorded. For problems with Learning Catalytics, call the following support number: 1- 800-677-6337 or visit https://learningcatalytics.com/pages/support .

B. University Support Services

College can be a very stressful time in a person's life. Resources are available on campus to help students meet academic goals and solve personal problems, which may interfere with their academic performance. If you find that you are having difficulty emotionally or academically, there is substantial support available. See "A Self Help Guide for Students" or contact on of the following services:

1. UF Counseling and Wellness Center, Radio Rd Facility, 392-1575
2. Dean of Students Office, 202 Peabody Hall, 392-1261
3. Career Resource Center, Reitz Union, 392-1601

4. CLAS Academic Advising Center, Farrior Hall, 100 Fletcher Drive, 392-1521
5. UF Field and Fork Pantry, 564 Newell Dr., 294-3601

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Dean of Students (202 Peabody Hall, 392-1261) for support. Furthermore, please notify your instructor(s) if you are comfortable in doing so. This will enable us to provide any resources that we may possess.

C. Other Questions
If you have non-tech-support questions about other aspects of the course, check the following sources first to see if it is already answered, before e-mailing your instructor:
o Course Syllabus
o Course Announcements (this is the primary means that your instructor has to communicate with you in a timely manner)
o Course FAQ Discussion Boards

If you still cannot find the answer to your questions:
o If it is a question that others might find useful to know the answer to as well (regarding the course material, specifics of an assignment, etc.), post it to the discussion board.
o If it is a question specific to you (e.g. account or grade specific), contact Dr. Gerlach via e-mail.

Grading Scheme X. Assessments and Grading
A. Course Structure
Final grades will be based on 4 exams (15% each), homework assignments/projects throughout the semester (25%), and participation in lecture activities including Learning Catalytics questions (15%). A more detailed breakdown of assignments and grading proportions can be found in the Canvas gradebook.
B. Assignments
Assignments for this course focus around having students practice with the course material, and gain experience with observing and quantifying animal behavior in the field, and with identifying hypotheses to explain animal behavior and designing experiments to test these hypotheses.

• Tinbergen's 4 Questions and Group Selection Practice (24 pts) – Students will practice applying the core principle of Tinbergen's 4 questions to hypothetical examples of behavior, and will practice identifying group selection-based explanations for behavior and formulating alternative hypotheses.
• Questioning Behavior (20 pts) – Students will make casual observations about animal behavior, formalize these into scientific questions about behavior, formulate testable hypotheses about this behavior, and generate predictions about the results of testing these hypotheses.
• Data Collection Preparation (22 pts) – Students will work in pairs to devise a methodology for observing the behavior of wild animals, including creating an ethogram, formulating a sampling methodology, and creating an appropriate data sheet for recording their observations.
• Field Notes and Ethogram Analysis (26 pts) – Students will work in pairs to spend a minimum of four hours observing their specified wild animal, and will complete a preliminary analysis to compare the time budgets of two groups of animals (e.g. female vs. male, adult vs. juvenile, etc.)
• Experiment (44 pts) – Students will design a set of two linked experiments that address a question regarding animal behavior from multiple levels of analysis, and discuss potential results to these experiments and their implications.

All assignments must be submitted to Canvas by 11:40 a.m. (i.e. prior to class) on the scheduled due date. Assignments submitted on paper or via e-mail will not be accepted. TurnItIn software will be used to check all assignments for originality.
C. Learning Catalytics
Learning Catalytics will be used for both in-class and out-of-class clicker/quiz questions. Most Learning Catalytics questions will be scored as 1 point for a correct answer and 0.5 points for an incorrect answer. Learning Catalytics has an answer/discuss/answer feature in which a question is presented for a second time after students have discussed the question with their classmates. In these cases, both the initial question and the second presentation are each worth 1 point. No participation credit will be given without a submitted answer, so please make sure that your device is charged and has a stable connection to the internet. Your final Learning Catalytics score will be determined as the

proportion of possible points that you earned, scaled to 80%. Thus, if you earn 80% or more of the possible Learning Catalytics points, you will receive 100% of the course points for this assignment.

D. Extra Credit

There will be four short extra-credit opportunities in this course in which students are asked to read and evaluate the primary literature related to course material, corresponding to each of the four lecture exams. Each opportunity will be worth a maximum of 0.5% of the final course grade. More information regarding these assignments and their due dates will be available on the Canvas course site. No individualized extra credit opportunities will be available.

E. Grading

Minimum grade cutoffs are listed below. These cutoffs will not be raised; in other words, if you receive 93% of the possible points, you are guaranteed to earn an A grade. A curve may be applied to individual exams or assignments, or to the final overall scores, depending on the class average, and will be communicated clearly. However, I will not adjust cut-offs or round-up grades on an individual basis for any reason.

Point Range (%)	Letter Grade
93	A
90	A–
87	B+
83	B
80	B–
77	C+
73	C
70	C–
67	D+
63	D
60	D–
< 60	E

Note that the current UF policy for assigning grade points is available at the following undergraduate catalog web page: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx.

F. Incomplete("I"): If a student has completed the majority of the course work with a passing grade and particular DOCUMENTED circumstances prevent completion of the course in the time allotted, the student may, with the agreement of the instructor, be assigned an "I" pending resolution of the grade. All incompletes MUST be resolved by the end of the following term or the student will receive a grade of "E" (failing).

G. Special Treatment

Please do not request individual special treatment regarding grading at the end of the semester; I do not adjust grades for individuals for any reason. Plan to do well on all exams and other assignments from the beginning of the semester; if you are having difficulty in the class, please let me know sooner rather than later.

Instructor(s) Nicole Gerlach

UF UNIVERSITY of FLORIDA

UCC: External Consultations

External Consultation Results (departments with potential overlap or interest in proposed course, if any)

Department	Name and Title
Animal Sciences	John Arthington, Professor and Chair
Phone Number	**E-mail**
352-294-6940	jarth@ufl.edu

Comments

The faculty member in our Department with a similar course does not feel that the two overlap. In fact, she commented that the two may complement each other for students with a specific interest in the topic.

Department	Name and Title
Phone Number	**E-mail**

Comments

Department	Name and Title
Phone Number	**E-mail**

Comments

Couldn't create PDF for uccconsult form Psychology.pdf

Download PDF here

ZOO4XXX – Animal Behavior

Section XXXX

Syllabus for Spring 2019

I. Course Description and Prerequisites

The scientific study of the mechanistic and evolutionary causes of animal behavior, including communication, foraging and anti-predator behavior, spatial behavior, mating behavior, parental care, and social behaviors. 3 credits.

Prerequisites: BSC 2011 and BSC2011L or the equivalent with a minimum grade of "C". PCB 4674 suggested (previously or concurrently) but not required.

II. Course Meetings

Lectures: MWF period 5, 11:45 a.m. – 12:35 p.m., G086 McCarty B

First day of classes: Monday , XX January 2019

Last day of classes: Wednesday , XX April 2019
Final Exam: Group XX, XX May 2018, XX a.m. – XX p.m.

III. Instructors

Course Instructor:
Dr. Nicole Gerlach
Department of Biology
Office: 520 Carr Hall
Phone: 352-392-2419
Office Hours: Tuesday 1-2:15 p.m. or by appointment
E-mail: ngerlach@ufl.edu

IV. Course Communications

A. Course Website: **https://ufl.instructure.com/courses/XXXXXX/**

B. Contacting Your Instructor : If you have a question about course mechanics or course material that cannot be answered from the syllabus, course announcements, or the course FAQ, please post it to the Discussion Boards on Canvas (see section IX "Getting Help", below). If you have a question involving a personal/grade-related issue, please e-mail Dr. Gerlach. E-mail is by far the best way of contacting Dr. Gerlach (rather than the phone). All e-mail correspondence should originate from your @ufl.edu account, have your full name in the body of the e-mail, and contain "ZOO4XXX" in the subject line. E-mails not meeting these requirements may not be recognized by my e-mail filters, and thus may not be answered. Barring unusual circumstances, I do my best to reply within 24 hours during the week, and 48 hours over the weekend. E-mails and Discussion Board posts are checked at least once per day, but sometimes not more than that.

C. **Communications From Your Instructor:** Each student is solely responsible for reading and following the instructions, guidelines and schedules in this syllabus and on the course webpage, or announced in class. Not having read the information in this syllabus, on the webpage, or in course announcements will not constitute an excuse for missing deadlines, assignments, or other assessments. Please set your preferences in Canvas so that you receive timely notifications of course announcements and other information.

V. Course Resources

A. Textbook
Animal Behavior: Concepts, Methods, and Applications , 2e by Shawn E. Nordell & Thomas J. Valone. Oxford University Press (publisher), 2016.

A copy of this textbook is on reserve at the Marston Science Library.

B. Learning Catalytics
We will use the Learning Catalytics Classroom Response System for clicker/quiz questions during class, as well as for out-of-class response questions. Learning Catalytics allows students to use a laptop, tablet, smartphone, etc. to participate in a variety of types of questions. Information on correctly registering for Learning Catalytics will be available in Canvas. When setting up your account, **you must use your Gatorlink (ufl.edu) e-mail address.** Using an e-mail address other than your UFL e-mail address will result in you receiving NO credit for Learning Catalytics questions.

C. Course Website (Canvas)
Class material - including the syllabus, handouts, assignments, and gradebook – will be posted on the course Canvas website (https://ufl.instructure.com). For help with Canvas, call the UF Computing Help Desk at 352-392-4357, or visit the e-Learning support website: http://help.instructure.com/ .

VI. Course Objectives

Behavior is one of the most important and interesting aspects of animal biology. Behaviors permit flexibility that allows animals to respond rapidly to environmental changes. This course exposes students to the broad field of animal behavior. Students will come to understand the historical foundations of the field, as well as current theories and evidence for a broad range of behavioral topics. We will also focus on how the science underlying our theoretical understanding of behavior is conducted, and how behavioral hypotheses at all levels of analysis can be tested experimentally. Students also participate in practical exercises to learn some fundamental techniques used to study behavior, and will practice reading and analyzing current scientific literature. Behavioral ecology and the evolution of behaviors as adaptations will be recurring themes interwoven through all topics discussed.

By the end of this course, students should be able to:

- Distinguish between the four types of questions that may be asked about animal behavior, and formulate hypotheses of each type to explain a given behavior.
- Explain how behavioral hypotheses are formulated, the procedures used to test them, and the types of data that can be collected.
- Describe some of the mechanisms involved in the production of a behavioral sequence by an animal.
- Explain the role of natural and sexual selection in the evolution of behavior.
- Explain how these principles can be used to understand human behavior.

VII. Course Policies

A. Time Commitment

The UF College of Liberal Arts and Sciences assumes that each student will devote 3-4 hours per week per credit-hour to each course during the regular semester. Because ZOO4XXX is 3 credits, each student should therefore expect to devote 9-12 hours per week to this course in a 15-week semester.

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D. Late Work

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Correct grammar, punctuation, spelling, capitalization and paragraphing should be used in any college level submission, including exams and typed reports. I will take note of spelling and grammar and I will grade accordingly.

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- (352) 392-HELP - select option 2
- https://lss.at.ufl.edu/help.shtml

It is each student's responsibility to check their LearningCatalytics gradebook in a timely fashion to be sure their submissions are being properly recorded. **For problems with Learning Catalytics, call the following support number** : 1- 800-677-6337 or visit https://learningcatalytics.com/pages/support .

B. University Support Services

College can be a very stressful time in a person's life. Resources are available on campus to help students meet academic goals and solve personal problems, which may interfere with their academic performance. If you find that you are having difficulty emotionally or academically, there is substantial support available. See " A Self Help Guide for Students " or contact on of the following services:

1. UF Counseling and Wellness Center , Radio Rd Facility, 392-1575
2. Dean of Students Office , 202 Peabody Hall, 392-1261
3. Career Resource Center , Reitz Union, 392-1601

4. CLAS Academic Advising Center , Farrior Hall, 100 Fletcher Drive, 392-1521
5. UF Field and Fork Pantry , 564 Newell Dr., 294-3601

Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live, and believes this may affect their performance in the course, is urged to contact the Dean of Students (202 Peabody Hall, 392-1261) for support. Furthermore, please notify your instructor(s) if you are comfortable in doing so. This will enable us to provide any resources that we may possess.

C. Other Questions

If you have non-tech-support questions about other aspects of the course, check the following sources first to see if it is already answered, **before** e-mailing your instructor:

- Course Syllabus
- Course Announcements (this is the primary means that your instructor has to communicate with you in a timely manner)
- Course FAQ Discussion Boards

If you still cannot find the answer to your questions:

- If it is a question that others might find useful to know the answer to as well (regarding the course material, specifics of an assignment, etc.), post it to the discussion board.
- If it is a question specific to you (e.g. account or grade specific), contact Dr. Gerlach via e-mail.

X. Assessments and Grading

A. **Course Structure**

Final grades will be based on 4 exams (15% each), homework assignments/projects throughout the semester (25%), and participation in lecture activities including Learning Catalytics questions (15%). A more detailed breakdown of assignments and grading proportions can be found in the Canvas gradebook.

B. **Assignments**

Assignments for this course focus around having students practice with the course material, and gain experience with observing and quantifying animal behavior in the field, and with identifying hypotheses to explain animal behavior and designing experiments to test these hypotheses.

- **Tinbergen's 4 Questions and Group Selection Practice (24 pts)** – Students will practice applying the core principle of Tinbergen's 4 questions to hypothetical examples of behavior, and will practice identifying group selection-based explanations for behavior and formulating alternative hypotheses.
- **Questioning Behavior (20 pts)** – Students will make casual observations about animal behavior, formalize these into scientific questions about behavior, formulate testable hypotheses about this behavior, and generate predictions about the results of testing these hypotheses.
- **Data Collection Preparation (22 pts)** – Students will work in pairs to devise a methodology for observing the behavior of wild animals, including creating an ethogram, formulating a sampling methodology, and creating an appropriate data sheet for recording their observations.
- **Field Notes and Ethogram Analysis (26 pts)** – Students will work in pairs to spend a minimum of four hours observing their specified wild animal, and will complete a preliminary analysis to compare the time budgets of two groups of animals (e.g. female vs. male, adult vs. juvenile, etc.)
- **Experiment (44 pts)** – Students will design a set of two linked experiments that address a question regarding animal behavior from multiple levels of analysis, and discuss potential results to these experiments and their implications.

All assignments must be submitted to Canvas by 11:40 a.m. (i.e. prior to class) on the scheduled due date. Assignments submitted on paper or via e-mail will not be accepted. TurnItIn software will be used to check all assignments for originality.

C. **Learning Catalytics**

Learning Catalytics will be used for both in-class and out-of-class clicker/quiz questions. Most Learning Catalytics questions will be scored as 1 point for a correct answer and 0.5 points for an incorrect answer. Learning Catalytics has an answer/discuss/answer feature in which a question is presented for a second time after students have discussed the question with their classmates. In these cases, both the initial question and the second presentation are each worth 1 point. No participation credit will be given without a submitted answer, so please make sure that your device is charged and has a stable connection to the internet. Your final Learning Catalytics score will be determined as the proportion of possible points that you earned, scaled to 80%. Thus, if you earn 80% or more of the possible Learning Catalytics points, you will receive 100% of the course points for this assignment.

D. Extra Credit

There will be four short extra-credit opportunities in this course in which students are asked to read and evaluate the primary literature related to course material, corresponding to each of the four lecture exams. Each opportunity will be worth a maximum of 0.5% of the final course grade. More information regarding these assignments and their due dates will be available on the Canvas course site. No individualized extra credit opportunities will be available.

E. Grading

Minimum grade cutoffs are listed below. These cutoffs will not be raised; in other words, if you receive 93% of the possible points, you are guaranteed to earn an A grade. A curve may be applied to individual exams or assignments, or to the final overall scores, depending on the class average, and will be communicated clearly. However, I will *not* adjust cut-offs or round-up grades on an individual basis for any reason.

Point Range (%)	Letter Grade
≥ 93	A
≥ 90	A–
≥ 87	B+
≥ 83	B
≥ 80	B–
≥ 77	C+
≥ 73	C
≥ 70	C–
≥ 67	D+
≥ 63	D
≥ 60	D–
< 60	E

Note that the current UF policy for assigning grade points is available at the following undergraduate catalog web page: https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx .

F. **Incomplete("I"):** If a student has completed the majority of the course work with a passing grade and particular DOCUMENTED circumstances prevent completion of the course in the time allotted, the student may, with the agreement of the instructor, be assigned an "I" pending resolution of the grade. All incompletes MUST be resolved by the end of the following term or the student will receive a grade of "E" (failing).

G. Special Treatment

Please do not request individual special treatment regarding grading at the end of the semester; **I do not adjust grades for individuals for any reason** . Plan to do well on all exams and other assignments from the beginning of the semester; if you are having difficulty in the class, please let me know sooner rather than later.

XI. Disclaimer

This syllabus represents the current plans and objectives; however, schedules, requirements, and assignments may change throughout the semester as the need arises. Such changes, communicated clearly, are not unusual and should be expected.

XII. Weekly Schedule

NOTE: The following schedule is tentative; lecture topics, coverage, and reading assignments may change. Updated schedule and specific reading assignments will be posted on the course website throughout the semester.

Week #	Lecture #	Date	Lecture Topic	Chap
1	1	M 08 Jan	Introduction to Animal Behavior	1.1, 1.
	2	W 10 Jan	Tinbergen's Four Questions	1.2-1.3,
	3	F 12 Jan	Methods for Studying Behavior	2.1-
2	-	M 15 Jan	MLK JR. DAY – NO CLASS	-
	4	W 17 Jan	Ultimate Causes – Selection I	3.1-3.2
	5	F 19 Jan	Ultimate Causes – Selection II	3.3-
3	6	M 22 Jan	Ultimate Causes – Phylogenies	
	7	W 24 Jan	Proximate Causes – Genetics	
	8	F 26 Jan	Proximate Causes – Animal Personalities	
4	9	M 29 Jan	Proximate Causes – Hormones	Sup
	-	**W 31 Jan**	**EXAM I**	
	10	F 02 Feb	Proximate Causes – Neuro/Sensory I	
5	11	M 05 Feb	Proximate Causes – Neuro/Sensory II	
	12	W 07 Feb	Proximate Causes – Learning I	
	13	F 09 Feb	Proximate Causes – Learning II	
6	14	M 12 Feb	Communication I	
	15	W 14 Feb	Communication II	
	16	F 16 Feb	Communication III	
7	17	M 19 Feb	Foraging	

7	18	W 21 Feb	Antipredator Behavior	
	19	F 23 Feb	Introduction to Sexual Selection	
8	-	**M 26 Feb**	**EXAM II**	
	20	W 28 Feb	Intrasexual Selection	
	21	F 02 Mar	Intersexual Selection I	
-	-	M 05 Mar	SPRING BREAK – NO CLASS	
	-	W 07 Mar	SPRING BREAK – NO CLASS	
	-	F 09 Mar	SPRING BREAK – NO CLASS	
9	22	M 12 Mar	Intersexual Selection II	
	23	W 14 Mar	Mating systems I - Polygyny	
	24	F 16 Mar	Mating systems II - Polyandry / Leks	
10	25	M 19 Mar	Mating systems III - Monogamy and EPCs	
	26	W 21 Mar	Parental care I	
	27	F 23 Mar	Parental care II	
11	28	M 26 Mar	Parental care III	
	-	**W 28 Mar**	**EXAM III**	
	29	F 30 Mar	Animal Navigation	
12	30	M 02 Apr	Migration	
	31	W 04 Apr	Dispersal	
	32	F 06 Apr	Habitat Selection	
13	33	M 09 Apr	Experiment Workshop	
	34	W 11 Apr	Territoriality	
	35	F 13 Apr	Intro to Game Theory	
14	36	M 16 Apr	Aggression	
	37	W 18 Apr	Dominance Hierarchies	
	38	F 20 Apr	Sociality and Cooperation	
15	39	M 23 Apr	Kin Selection and Eusociality	
	40	W 25 Apr	Cooperation and Altruism in Non-Relatives	
	-	F 27 Apr	READING DAYS – NO CLASS	
FINALS	-	**W 02 May**	**EXAM IV**	

UF UNIVERSITY of FLORIDA

UCC: External Consultations

External Consultation Results (departments with potential overlap or interest in proposed course, if any)

Department	Name and Title
WEC / IFAS	Kathryn Sieving, Professor
Phone Number	**E-mail**
352-846-0569	chucao@ufl.edu

Comments

See attachment.

Department	Name and Title
Phone Number	**E-mail**

Comments

Department	Name and Title
Phone Number	**E-mail**

Comments

Consult: ZOO4XXX Intro. to Animal Behavior, Instructor, Dr. Nicole Gerlach (Biology, CLAS)

K. Sieving, WEC

ZOO4XXX is a classical introduction to the principles of Animal Behavior. UF has traditionally had a course like this since I began teaching here 20+ years ago, but due to retirements there has been a gap in coverage until Dr. Gerlach started teaching this course. Having recently received a consult on a related course from Dr. Gerlach and from an instructor in Animal Science with yet a third related course, I am very familiar with how the three courses in the three departments complement each other, and indeed they do.

Dr. Gerlach's class is lecture-only and thoroughly covers the principles of the field and entails a strong emphasis on mechanistic and evolutionary causes of behaviors in animals as discovered via the scientific method. The text assigned for students is very recent (2016) with a contemporary focus on understanding how behaviors develop and function for survival and reproduction. The authors have been leaders in the field for over two decades. In addition to lectures and exams students are required to conduct research on animal behavior outside of class.

The course differs from mine, WIS 4570C Wildlife Behavior and Conservation in two ways. Students in my class learn the principles of behavior from mechanistic and evolutionary perspectives, but only about half the course is focused on this. The other half (or more) is devoted to analyzing human-wildlife conflicts and applying basic understanding of behavioral principles to aid wildlife conservation programs. In animal science the behavior class at the undergrad level is devoted to understanding domesticated and captive animal behavior with an eye to applications in enrichment, safety, and husbandry.

In sum, Dr. Gerlach's class fits very well into a holistic campus-wide presentation of the principles and scientific approaches (ZOO) applied to wild species and biodiversity conservation (WEC) and to domesticated animal maintenance and care (ANS). Students who love animal behavior can take more than one without tiresome duplication, but rather with the opportunity to get tremendous breadth and depth in the topical area. Because no single course can offer all the principles, methods, and major applications of animal behavior, I wholeheartedly support this course proposal.

From: **Hellgren,Eric C** hellgren@ufl.edu
Subject: RE: WEC UCC consult for Animal Behavior Course ZOO4XXX
Date: August 9, 2018 at 12:27 PM
To: Gerlach, Nicole ngerlach@ufl.edu, Wayne,Marta L mlwayne@ufl.edu
Cc: Sieving, Katie chucao@ufl.edu

HC

To all:

I totally endorse Katie's comments. This course looks excellent.

My only additional suggestion: rename to 'Animal Behavior' or "Principles of Animal Behavior'. Although it is the first behavior course for most students, it is at the 4000-level. Given the depth of topic treatment, it seems to deserve more than 'Introduction' in the title.

Cheers,

ECH

_____

Eric C Hellgren
Professor and Chair
Department of Wildlife Ecology and Conservation
Institute of Food and Agricultural Sciences
University of Florida
Gainesville, FL 32611
Ph. 352-846-0552
http://wec.ufl.edu/

From: Sieving, Katie
Sent: Thursday, August 9, 2018 10:09 AM
To: Gerlach, Nicole <ngerlach@ufl.edu>; Hellgren,Eric C <hellgren@ufl.edu>
Cc: Wayne,Marta L <mlwayne@ufl.edu>
Subject: RE: WEC UCC consult for Animal Behavior Course ZOO4XXX

Here are the consult forms. Cheers - !
Katie

From: Gerlach, Nicole
Sent: Wednesday, August 08, 2018 5:55 PM
To: Sieving, Katie <chucao@ufl.edu>; Hellgren,Eric C <hellgren@ufl.edu>
Cc: Wayne,Marta L <mlwayne@ufl.edu>
Subject: WEC UCC consult for Animal Behavior Course ZOO4XXX

Hello,