

Introduction to Conservation Genetics (WIS 3553)

Spring 2017

4 credits

Instructor: Dr. James Austin

TA: John Hargrove

Course description and goals:

This course is designed for Wildlife Ecology and Conservation majors. In it you will learn how to apply and interpret molecular genetic principles and data to wildlife research and management problems. The course will be a mix of in-class lectures and discussion, quizzes and surveys (using CANVAS), and hands-on exploration of genetic data in laboratory exercises.

The course goals are for student to learn:

- What kind of information can be gained from DNA analyses.
- How genetic variation arises; why it is important for organisms to change or adapt.
- How natural selection acts to change the frequency of beneficial or harmful variation.
- Why population size is an important determinant of genetic diversity.
- What genetic variation tells us about the movement and inter-breeding of animals within (gene flow) and among (hybridization) species.
- Understand and interpret how genes reflect species and individual relationships.
- Apply genetics to objectively delineate populations and management units.

Specific learning objectives will accompany each weekly set of readings and assignments. These will be clearly identified in daily learning material.

Class meeting:

M, W, F Period 5, 11:45-12:35 Room – NZ 112

Labs (check schedule for dates):

08D1 M, Period 6-7 Room – MCCB3086

08D2 M, Period 8-9 Room – MCCB3086

You must attend your scheduled lab.

Readings:

The textbook required for the course is:

An Introduction to Phylogenetics and Evolution, 2nd ed. by Lindell Bromham [ISBN-978-0-19-873636-3].

We will also be examining some primary literature, and online material that will be available through Canvas. All assigned readings are required to be completed before the assigned class as we will spend much of class discussing the readings and evaluating your comprehension of the material. Failure to complete the readings will affect your ability to participate in in-class discussion.

Office location, office hours & expectations:

Building 116, 2322 Mowry Rd., Ph: 846-0646

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Course Prerequisites: Introduction to Statistics I (STA 2023), one of the introductory ecology courses (PCB 3034C, PCB 4044C, PCB 3601C, or FOR 3153C).

Grading:

Exams will be held in class and are “closed-book”. An optional final exam will be available to those wishing to attempt to increase their mark. The top 4 exam grades (% on exam, regardless of exam #) will be applied toward your final grade. I do not grant extra credit assignments.

Attendance will be conducted periodically throughout the term. This will be done via CANVAS and a head count in the room. Fewer students than registered on attendance will result in a delay in the start of class. Cheaters will be penalized by the loss of an additional point of their grade (so don't do it.)

Evaluation	% of grade	
Exam 1 (Jan. 30)	15	In class (exams will cover all material from readings, lectures, and lab exercises)
Exam 2 (Mar. 1)	20	In class
Exam 3 (Mar. 31)	15	In class
Exam 4 (Apr. 19)	15	In class
Attendance	14	Collected via Canvas
Lab evaluations	21	Open-book assessments based on questions posed for lab exercises – these will be assessed using Top Hat at the end

of each lab. Each will be assessed as 3% of your final grade.

Optional Final 15 or 20% Cumulative - Apr. 27 (10:00 AM -12:00 PM)

* Attendance: Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>. Examples include: serious illness (note required), university-sanctioned activities (letter from faculty required), religious holidays.

Students requesting accommodations:

Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must provide this to Dr. Austin by January 15.

Additional information:

Online Course Evaluation Process: Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results>.

Academic Honesty: As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity." You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit at the University of Florida, the following pledge is either required or implied: "On my honor, I have neither given nor received unauthorized aid in doing this assignment." It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code>.

Services for Students with Disabilities: The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive

computer equipment, providing interpretation services and mediating faculty-student disability related issues. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation 0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc

Campus Helping Resources: Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance