

**BIOL 3445: INTRODUCTION TO EVOLUTION
POLICY AND COURSE GUIDE: FALL 2015**

DESCRIPTION: Introduction to the processes and patterns of evolution. Topics include: history of evolutionary thought, origin of life, evidence for evolution, phylogenetics, evolutionary genetics, natural selection and other evolutionary forces, speciation and biodiversity, evolution of sexual reproduction and social organization.

PREREQUISITES: One year of general biology (BIOL 2051, 2061, 2071, and 2081 or equivalent), with a grade of “C-” or higher. Prerequisite knowledge includes a very basic understanding of genetics and evolution. NOTE: Review relevant General Biology notes

INSTRUCTORS:

Dr. Robert Laport
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Office Hours: Th 5:00-6:00 PM and by appointment

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Dr. John Swallow
Office: SI 2071
Office Hours: W 1:00-2:00PM or by appointment

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REQUIRED TEXTS: Reading assignments are not optional. Unless otherwise indicated, you are responsible for all reading assignments as indicated on the syllabus. A portion of all quiz and exam questions will derive directly from the reading assignments.

Zimmer, C., and D. J. Emlen. 2015. *Evolution: Making Sense of Life* (2nd Ed.). Roberts and Company Publishers, Englewood.

Miscellaneous articles from the primary, secondary, and gray literature.

Required Remote: Turning Technologies RF LCD
(Response Card) ISBN:9781934931684

The Turning Technologies Response Remote is **required** to earn points for participation & attendance.

Turning Technologies URL:

<http://store.turningtechnologies.com/>

School Code = m2qa



You can buy this at the CU Bookstore, or, receive the UC Denver pricing if you buy it online with no bookstore markup. Students must purchase the device, the ResponseCard RF LCD. You do not need the monthly licenses, just the ResponseCard RF LCD device. New devices often come with one year account license, and *the license hypothetically* allows you to use your own phone in the classroom for answering questions. **However**, because this will fail if phone connectivity/WIFI is down or signals are weak, therefore we require that you spend an extra \$10 to get the physical device shown above. This is **NOT** an iClicker!

CANVAS: If you are registered for the class, you will have access to Canvas shell for this course (see <https://ucdenver.instructure.com/login>). The policy, syllabus, learning objectives, handouts, assignments, keys, articles, and announcements will be posted here. Check Canvas often, particularly to ensure that you are aware of your grade to date.

DISABILITY RESOURCES AND SERVICES: Students with disabilities who require accommodation should contact Bruederle immediately. To be eligible for accommodations, students should be registered with the UCD Office of Disability Resources and Services (Academic Building 1, Suite 2116, 303-556-3510, TDD 303-556-4766).

SCHEDULE: This three-credit lecture course meets twice weekly (TuTh 3:30-4:45PM) in SCB 1600.

CLASS ATTENDANCE: Students not registered on census date (**see deadlines**) will **not** be allowed to attend class. Regular attendance is integral to success in this course and is expected of every student. In the event of an absence, we will provide you with lecture handouts. Lecture notes must be obtained from another student. We do not provide lecture notes or copies of PowerPoint presentations. Students requiring accommodation for conflict(s) (e.g., major religious holidays) should notify Laport at the beginning of the semester. **Absence in more than two lecture periods is considered excessive.**

RELIGIOUS HOLIDAY ACCOMMODATIONS: Faculty in the University of Colorado system are committed to providing reasonable accommodation to students who must be absent from classes because of religious holidays. Students are asked to privately identify all course conflicts at the beginning of the semester.

ABSENCES AND CAMPUS CLOSURES. To check for campus closure call 303-556-2401. In the event that the University is closed unexpectedly for snow, inclement weather, or any other reason, students should expect a missed exam to be given during the next regularly scheduled class period. Laport will adjust the course schedule for a missed lecture. **No exams will be administered prior to the scheduled time.**

PROFESSIONALISM: It is expected that students display a professionalism in class similar to that expected in the workplace. This pertains to attendance, engagement, organizational skills, initiative, responsiveness to feedback, personal responsibility, interpersonal skills, independence, quality of work, and communication.

ASSESSMENTS:

WORKSHEETS, SIMULATIONS, AND CLICKER QUESTIONS (20%): Students will be given a variety of assignments designed to reinforce material covered in lecture and to develop higher order thinking and problem solving skills. Examples include population genetic problems, short answer responses to primary literature reading assignments, and **SimBio** simulations. Six assignments will be administered during the semester, with the lowest score dropped.

MIDTERM EXAMS (60%): Three midterm exams each valued at 20% of the total grade (dates TBA) will be administered throughout the semester. Questions will be a combination of multiple choice, short answer, and essay.

FINAL EXAM (20%): A cumulative final will be administered during finals week. (TBA). Questions will be a combination of multiple choice, short answer, and essay.

STRATEGIES FOR SUCCESS: There are many different strategies employed successfully by students in an upper-division course, such as “Introduction to Evolution.” Following are suggestions that students have found useful in the past.

- Review your notes shortly after each lecture — the sooner the better. Rewrite them, or at least annotate them. Write down all questions and have an instructor address them during the next class period.
- Read assignments promptly. Each week you will be responsible for approximately 20 pages of readings. Set aside one or two hours each week to complete the readings. Interact with your texts. Write in them! Highlight them!
- Form a study group of your peers for regular, if only brief, meetings.
- Utilize office hours and appointments. Come prepared with questions.
- If this sounds like a large investment of time, it is! The University recommends that students schedule two to three hours outside of class each week for every credit hour spent in class; that’s 6-9 hours total!

GRADES: Letter grades will be assigned as follows based on your cumulative performance.

Worksheets, simulations, and clicker questions	20% of grade	Grade: 93.4 - 100.0% = A
Midterm exams	60% of grade	90.0 - 93.3% = A-
Cumulative final exam	<u>20% of grade</u>	86.7 – 89.9% = B+
	100% total	83.4 - 86.6% = B
		80.0 - 83.3% = B-
		76.7 - 79.9% = C+
		73.4 - 76.6% = C
		70.0 - 73.3% = C-
		66.7 - 69.9% = D+
		63.4 - 66.6% = D
		60.0 - 63.3% = D-
		0.00 - 59.9% = F

INCOMPLETE GRADES (IW/IF) are not granted for low academic performance. To be eligible for an Incomplete grade, a student must have (1) successfully completed 75 percent of the course with a “C” (2.00) or higher, (2) have special circumstances (verification may be required) that preclude the student from attending class and completing graded assignments, and (3) make arrangements to complete missing assignments with the original instructor. A CLAS Course Completion agreement is required. An incomplete (I) will be granted only if a documentable circumstance (e.g., illness) disallows completion of the course in its final few weeks and only if the student has maintained a passing grade prior to that point.

Administration of an incomplete is at the discretion of the instructor and must be completed by the end of the **next** semester in consultation with Swallow.

GRADE	UCD Definition	Definition
A	excellent	Thorough comprehension of material; ability to integrate lecture, lab, assigned readings; ability to conceptualize and apply knowledge.
B	above average	Broad comprehension of material with few misconceptions; ability to integrate lecture and laboratory; ability to apply knowledge.

C	average	General comprehension of material with some misconceptions; some difficulty in applying knowledge.
D	minimum passing	Minimal grasp of material with many misconceptions; inability to apply knowledge; satisfactory attendance and participation.
F	failing	Poor or little grasp of material; attendance and participation unsatisfactory.

UNIVERSITY POLICIES AND ACADEMIC DISHONESTY: It is assumed that all students are familiar with the policies delineated in the University Catalogue. A university's reputation is built on a standing tradition of excellence and scholastic integrity and, as such, students are expected to know, understand, and comply with the ethical standards of the University. As members of the University of Colorado Denver academic community, faculty and students accept the responsibility to maintain the highest standards of intellectual honesty and ethical conduct. In particular, students are required to know, understand, and comply with the **CU Denver Academic Dishonesty Policy**. Academic dishonesty is defined as a student's use of unauthorized assistance with intent to deceive an instructor or other such person who may be assigned to evaluate the student's work in meeting course and degree requirements. Academic dishonesty consists of plagiarism, cheating, fabrication and falsification, multiple submission of the same work, misuse of academic materials, and complicity in academic dishonesty (see Appendix A).

All work in this class is to be completed independently, unless otherwise indicated. Non-compliance will result minimally in a grade of zero for that effort, documentation of the episode, and disciplinary action as set forth by College policy, with penalties ranging from failure of this course to dismissal from the University. So, be informed and be careful. If this is unclear to you, ask your professor. For more information regarding the Academic Ethics Committee policies and procedures, please refer to:

<http://ucdenver.edu/academics/colleges/CLAS/faculty-staff/policies/Pages/HandlingAcademicDishonesty.aspx>.

GRIEVANCES: A student who has a grievance with any aspect of this course should meet with Laport or Swallow during office hours to discuss the problem. This discussion will not take place by e-mail. If an honest and sincere dialogue cannot resolve the grievance, the student may make an appointment to discuss the problem with Dr. Charles Ferguson as the appropriate next step.

TENTATIVE LECTURE SCHEDULE			
Date	Topic	Event/Instructor	Text
Week 1	Natural Philosophy to Darwin and Beyond	Laport	Chaps.1-2
Week 2	Geology and the History of Life	Laport	Chap. 3
Week 3	Constructing the Tree of Life	SimBio (Flowers & Trees) Laport	Chap.4
Week 4	Raw Material of Evolution	Concept Inventory Natural Selection Laport	Chap. 5
Week 5	Raw Material of Evolution (cont)	Exam I (17 September) Laport	Chap. 5
Week 6	Mechanisms of Evolutionary Change	SimBio (Snails & Crabs) Laport	Chap. 6
Week 7	Mechanisms of Evolutionary Change (cont)	Laport	Chap. 6
Week 8	Quantitative Genetics	Problem Set I Laport	Chap. 7
Week 9	Natural Selection and Adaptation	SimBio (Sickle Cell) Laport	Chaps.8-10
Week 10	Natural Selection and Adaptation (cont)	Exam II (22 October) Laport	Chaps.8-10
Week 11	Natural Selection and Adaptation (cont)	Laport	Chaps.8-10
Week 12	The Origin of Species	SimBio (Finches & Islands) Swallow	Chap. 13
Week 13	The Origin of Species (cont)	Concept Inventory Natural Selection Swallow	Chap. 13
Week 14	Macroevolution	Problem Set II Swallow	Chap. 14
Week 15	Macroevolution (cont)	Exam III (3 December) Swallow	Chap. 14
Week 16	Finals Week	Comprehensive Final (TBD)	

Fall 2015 CLAS Academic Policies

The following policies, procedures and deadlines pertain to all students taking classes in the College of Liberal Arts and Sciences (CLAS) and are aligned with the Official University Academic Calendar: <http://www.ucdenver.edu/student-services/resources/registrar/Documents/AcademicCalendars/downtown/Fall/AcademicCalendarFall2015.pdf>

Please also see an academic advisor if you have questions or concerns.

- **Schedule verification:** It is each student's responsibility to verify that their official registration and schedule of classes is correct in their UCD Access Portal before classes begin and by the university census date. Failure to verify schedule accuracy is not sufficient reason to justify late adds or drops. Access to a course through Canvas is not considered officially enrolled
- **E-mail:** Students must activate and regularly check their official CU Denver e-mail account for university related messages.
- **Administrative Drops:** Students may be administratively dropped from a class if they never attended or stopped attending, if the course syllabus indicates that the instructor will do this. Students may be administratively dropped if they do not meet the prerequisites for the course as detailed in course descriptions.
- **Late adds and late drops/withdrawals** require a written petition, verifiable documentation and dean's approval. Undergraduate students should visit the CLAS advising office (NC1030) and graduate students should visit the Graduate School (12th floor LSC) to learn more about the petition process and what they need to do to qualify for dean's approval.
- **Waitlists:** Students are notified if they are added to a class from a waitlist by the Office of the Registrar at their CU email account. Students are not automatically dropped from a class if they never attended, stopped attending, or do not make tuition payments. After waitlists are purged, students must follow late add procedures to be enrolled in a course. Students will have access to Canvas when they are on a waitlist, but this does not mean that a student is enrolled or guaranteed a seat in the course. Students must obtain instructor permission to override a waitlist and this is only possible when there is physical space available in a classroom, according to fire code.

Important Dates and Deadlines

- **August 17, 2015:** First day of classes.
- **August 23, 2015:** Last day to add or waitlist a class using the UCDAccess student portal.
- **August 24, 2015:** Last day to drop a class without a \$100 drop charge--this includes section changes.
- **August 24, 2015:** All waitlists will be eliminated today. Please check your schedule in your UCD Access portal to ensure you are enrolled in all intended classes.
- **August 25-September 2, 2015:** Students must obtain instructor permission to add a course using the Instructor Permission to Enroll Form and routing it through the CLAS Dean's Office in NC 5014 or electronically through CLAS.Courses@ucdenver.edu.
- **September 2, 2015: Census date.**
 - **9/2/15, 5 PM:** Last day to add full term classes with instructor approval; after today dean's approval is also required. After this date, you will be charged the full tuition amount for additional classes added – College Opportunity Fund hours will not be deducted from eligible student's lifetime hours.
 - **9/2/15, 5 PM:** Last day to drop full term classes with a financial adjustment. After this date dropped classes require instructor signature approval and will appear on your transcript with a grade of 'W'. After this date, a complete withdrawal (dropping all classes) from the term will require the signature of the dean and no tuition adjustment will be made. Signature of Financial Aid Office is required if you have accepted financial aid (loans, grants or scholarships).
 - **9/2/15, 5 PM:** Last day to apply for Fall 2015 graduation. Undergraduates must make an appointment and see their academic advisor before this date to apply for graduation. Graduate students must complete the Intent to Graduate and Candidate for Degree forms.
 - **9/2/15, 5 PM:** Last day to request No Credit or Pass/Fail grade for a class using a schedule adjustment form.
 - **9/2/15, 5 PM:** Last day to petition for a reduction in Ph.D. dissertation hours.
- **September 2-October 26, 2015:** Students must obtain instructor permission to drop a course using the Schedule Adjustment Form and routing it through the Office of the Registrar. To add a course, students must petition through undergraduate advising or the graduate school as appropriate.
- **September 7, 2015:** Labor Day observed--no classes, campus closed.
- **October 27, 2015:** First day the Office of the Registrar requires a dean's signature on a Schedule Adjustment Form to withdraw from a class.
- **November 23-29, 2015:** Fall Break—no classes, campus open.
- **November 26, 2015:** Thanksgiving Holiday observed—no classes, campus closed.
- **December 12, 2015:** End of semester.
- **January 28, 2016:** Final grades available on UCDAccess and on transcripts (tentative)

Appendix A. Examples of academic dishonesty include, but are not limited to, the following:

A. Plagiarism: Plagiarism is the use of another person's distinctive words or ideas without acknowledgment. Examples include:

1. Word-for-word copying of another person's ideas or words;
2. The mosaic (interspersing of one's own words here and there while, in essence, copying another's work);
3. The paraphrase (rewriting of another's work, yet still using their fundamental idea or theory);
4. Fabrication of references (inventing or counterfeiting sources);
5. Submission of another's work as one's own;
6. Neglecting quotation marks on material that is otherwise acknowledged.

NOTE: Acknowledgment is not necessary when material used is common knowledge.

B. Cheating: Cheating involves the possession, communication, or use of information, materials, notes, study aids or other devices not authorized by the instructor in an academic exercise, or communication with another person during such an exercise. Examples include:

1. Copying from another's paper or receiving unauthorized assistance from another during an academic exercise or in the submission of academic material;
2. Using a calculator when its use has been disallowed;
3. Collaborating with another student or students during an academic exercise without the consent of the instructor.

C. Fabrication and Falsification: Fabrication involves inventing or counterfeiting information, i.e., creating results not obtained in a study or laboratory experiment. Falsification, on the other hand, involves the deliberate alteration of results to suit one's needs in an experiment or other academic exercise.

D. Multiple Submissions: This involves submitting work for which academic credit has already been earned, when such submission is made without instructor authorization.

E. Misuse of Academic Materials: The misuse of academic materials includes, but is not limited to, the following:

1. Stealing or destroying library or reference materials or computer programs;
2. Stealing or destroying another student's notes or materials, or having such materials in one's possession without the owner's permission;
3. Receiving assistance in locating or using sources of information in an assignment when such assistance has been forbidden by the instructor;
4. Illegitimate possession, disposition, or use of examinations or keys to examinations;
5. Unauthorized alteration, forgery, or falsification;
6. Unauthorized sale or purchase of examinations, papers, or assignments.

F. Complicity in Academic Dishonesty: Complicity involves knowingly contributing to another's acts of academic dishonesty. Examples include:

1. Knowingly aiding another in any act of academic dishonesty;
2. Allowing another to copy from one's paper for an assignment or exam;
3. Distributing test questions or information about test materials before the assessment;
4. Taking an exam or test for someone else;
5. Signing another's name on attendance roster or on an academic exercise.