

**Evolutionary Biology (BIOL 006)
Fall 2009**

Dr. Kurt M. Pickett
316 Marsh Life Science Building
(802) 656-0460
kurt.pickett@uvm.edu
Office hours: Mondays, 10:00 AM – 12:00 PM (by prior appointment)

Lecture: 1:55 PM – 2:45 PM, MWF, 235 Marsh Life Science Building

Objectives

Students will be able to understand the process of descent with modification (i.e., evolution). The course will include the historical development of evolutionary thought, the structure of evolutionary theory, the mechanisms by which lineages change and a general framework of the history of life.

Texts: None, but we will read:

Dawkins, R. 1996. *The Blind Watchmaker*. W. W. Norton and Co., New York.

Tests and Quizzes

There will be four exams (including the final) during the semester. All regularly scheduled exams will be multiple choice. The second and third exams are not cumulative. The final exam is cumulative, but will emphasize material covered in lecture after the third exam. If for some reason you cannot attend an exam, make-ups will be allowed for excused absences arranged in advance. All make-up exams will be essay format.

There will be five quizzes given during the semester on chapters of the book, *The Blind Watchmaker*. These quizzes will be delivered via Blackboard (<http://bb.uvm.edu>), will begin after you are to have read the third chapter, and be due every other week thereafter (see schedule, below). Any chapter to have been read prior to the week of a given quiz is fair game for content. Each quiz is worth ten points. Quiz make-ups will not be permitted as you have one full week to complete each.

I do not offer extra credit.

<u>Tests</u>	<u>Points</u>
Exam I	100
Exam II	100
Exam III	100
<i>Watchmaker</i> Quizzes	50
Final Exam	100
Total	450

UVM's Values and Policies

Learning Accommodation: If you need learning accommodation, you must notify me within the first week of class. Adaptations and instructional supports are available through consultation with the instructor and UVM's Office of Accommodation, Consultation, Collaboration & Educational Support Services (ACCESS: <http://www.uvm.edu/~access/>). Only students properly registered with ACCESS will receive learning accommodation. See policy on disability certification and student support: <http://www.uvm.edu/~uvmppg/ppg/student/disability.pdf>

Religious Holidays: Students have the right to practice the religion of their choice. If you need to miss class to observe a religious holiday, you must submit the dates of your absence to me in writing by the end of the second full week of classes. You will be permitted to make up work within a mutually agreed-upon time.

Preferred Name and Pronoun Information: Any student at the University of Vermont can indicate a preferred first name and pronoun to the university community regardless of whether there has been a legal name change. Utilizing this process will result in changes in the following areas: CATcard, Degree Audit Reporting System, Grade Reports, Advisee Lists, Unofficial Transcripts, Library sign-out process, Directory Listing (unless you have chosen FERPA Exclusion; see below). Information on how to change your preferred name and pronoun are housed on the [Registrar's Preferred Name and Pronoun Website](#). Also available are instructions for how to change your email address to use your preferred name.

Student Responsibilities and Rights

Academic Integrity: UVM's Code of Academic Integrity addresses plagiarism, fabrication, collusion, and cheating. The code will be enforced. Please familiarize yourself with it: <http://www.uvm.edu/~uvmppg/ppg/student/acadintegrity.pdf>

Grading Policies: For information on grading and GPA calculation, go to <http://www.uvm.edu/academics/catalogue> and click on Policies for an A-Z listing.

Grading Appeals: If at some point you believe you have received an unfair course grade, you may want to consult UVM's policy on grade appeals: <http://www.uvm.edu/~uvmppg/ppg/student/gradeappeals.pdf>

FERPA Rights Disclosure: The purpose of this policy is to communicate the rights of students regarding access to, and privacy of their student educational records as provided for in the Family Educational Rights and Privacy Act (FERPA) of 1974: <http://www.uvm.edu/~uvmppg/ppg/student/ferpa.pdf>

Lecture Schedule

- August 31 Course Introduction, and the Heterobathmy of Descent
 September 2 Modern Science: Theory and Data
 September 4 History of Evolutionary Thought I
 September 7 Labor Day (no classes)
 September 9 History of Evolutionary Thought II
 September 11 Guest Lecture: Dr. Nicholas Gotelli
 September 14 The Darwinian Revolution I (Add/Drop, Pass/No Pass, Audit Deadline)
 September 16 The Darwinian Revolution II
 September 18 Review for Exam 1 (Finish Chapter 1 of *Watchmaker*)
- September 21 **Exam 1**
- September 23 Natural Selection
 September 25 Sexual Selection (Finish Chapter 2 of *Watchmaker*)
 September 28 Group and Kin Selection I
 September 30 Group and Kin selection II
 October 2 Guest Lecture: Dr. Sara Helms Cahan (Finish Chapter 3 of *Watchmaker*)
 October 5 Systematics (Complete *Watchmaker* Quiz 1 by Friday of this week)
 October 7 The Tree of Life
 October 9 Fall Recess (no classes; finish Chapter 4 of *Watchmaker*)
 October 12 The Origins of Life
 October 14 Paleontology I: The Geological Record and Transitional Fossils
 October 16 Paleontology II: Biodiversity, Rise and Fall (Finish Chapter 5 of *Watchmaker*)
 October 19 Embryology (Complete *Watchmaker* Quiz 2 by Friday of this week)
 October 21 Review for Exam 2
- October 23 **Exam 2** (Finish Chapter 6 of *Watchmaker*)
- October 26 Old-School Genetics: Mendel and The New Synthesis
 October 28 Modern (molecular) Genetics: DNA, Genomes, and Mutation
 October 30 Population Genetics: Hardy-Weinberg (Finish Chapter 7 of *Watchmaker*)
 November 2 Genetics Review (Complete *Watchmaker* Quiz 3 by Friday of this week)
 November 4 The Example of HIV
 November 6 The Evolution of Sex (and Last Day to Withdraw; finish Chapter 8 of *Watchmaker*)
 November 9 Human Evolution
 November 11 What Evolution has to say about Human Races
 November 13 Guest Lecture: Dr. Joseph Schall (Finish Chapter 9 of *Watchmaker*)
 November 16 Human Sexual Strategies I (Complete *Watchmaker* Quiz 4 by Friday of this week)
 November 18 Review for Exam 3
- November 20 **Exam 3** (Finish Chapter 10 of *Watchmaker*)

- November 23 Human Sexual Strategies II
- November 25 Thanksgiving (no classes)
- November 27 Thanksgiving (no classes; Finish Chapter 11 of *Watchmaker*)
- November 30 Evolution and Medicine (Complete *Watchmaker* Quiz 5 by Friday of this week)
- December 2 Adaptation vs. Evolution's lack of perfection
- December 4 Film: Evolution of the Dog
- December 7 Controversial Topics in Human Evolution
- December 9 Review for Final Exam

- December 11 **Final Exam, 11:45 AM - 02:45 PM** (same room as lecture: 235 Marsh Life Science)

Note: This schedule is subject to change.