

INSTRUCTOR

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Since this course is entirely online, with students spread across the state, the country, and sometimes the world, I don't have office hours. However, I'm usually available via email, telephone, or (ideally) in our **ChatRoom** discussion forum (see below).

COURSE DESCRIPTION

This online course will provide students with the pre- and post-Darwinian history of efforts to understand the origin and development of biological diversity. After Darwin published his book *On the Origin of Species* in 1859, the evidence for the evolution of life has expanded exponentially as has the explanatory and predictive power of evolutionary theory. Students will learn about the origins of, and the evidence for, evolutionary theory and its significance for science and society. To gain deeper insights, we'll engage in extended class discussions about evolutionary research and the various aspects and components of the evolutionary process that are highlighted by that research. We'll also learn how to recognize and evaluate evidence.

COURSE OBJECTIVES

Students will:

- learn about the history of ideas regarding the origins of biodiversity
- learn the critical elements of modern evolutionary theory
- examine components & processes that underlie inheritance, variation, and evolutionary change
- explore various concepts, consequences, and predictions of evolutionary theory
- gain the necessary background in biology to appreciate how evolutionary change occurs and how new species arise and are identified
- develop an understanding of evolutionary theory that can be communicated to others
- develop an appreciation for the process of science, including how to recognize and evaluate evidence

COURSE RESOURCES

Canvas

[Login to Canvas](#) (our online course management system) with your A# and your global USU password. Then click **Sp17 BIOL-3010-XL** to open our **Home Page**. Once there, click **Announcements** in the vertical left-side submenu to get the latest information from me. Then click **Modules** in that same submenu and open the module for the current week. There you'll find my comments on our goals for the week along with links to any presentations, documents, or websites. To return to the **Home Page**, click **Home** in the left-side submenu.

Software

Documents and presentations will be presented as URLs, PDFs, Powerpoints, MP3s, or MP4s. PDF files can be viewed with the free [Adobe Reader](#). PowerPoint files can be viewed with Microsoft software (the individual program or the MS Office suite). If you don't have or can't afford MS Office, free office suites like [ApacheOpenOffice](#) and [LibreOffice](#) will open Microsoft files on both Macs and PCs. MP3s & MP4s can be accessed with various programs (see [Presentations](#) below). A good free audio/video player is [VLC](#), which seems able to play any audio or video files. And you'll need a good word-processing program (which all three office suites mentioned above have).

Textbook

Get the 4th edition, 2007, of *[Strickberger's Evolution](#)* by Brian Hall and Benedikt Hallgrimsson, Jones & Bartlett Publishers. You can get some pretty good deals on [new ones here](#), some [new and used ones here](#), and more used ones [here](#), [here](#), and [here](#). **Be sure to get the 4th edition** (not the newer version)! Used are fine. There may be some at the USU bookstore as well. If you can't find it, be sure to let me know the first week of class.

Additional Reading Materials

Besides textbook chapters, other course sources will include readings taken from peer-reviewed science journals, online presentations, etc., presented as PDFs, DOC files, or videos on Canvas, or accessible via hyperlinks. New discoveries are constantly being made that enhance our knowledge of biodiversity, evolutionary relationships, and the process and mechanisms of biological evolution. As a result, these readings and presentations vary each semester.

COURSE ACTIVITIES

Assigned Readings

We will read one to two textbook chapters each week, and I'll base our quizzes on information from those chapters. Additionally, we'll read a number of science articles for the assigned discussions.

PowerPoint Presentations

Most weeks I'll provide 1 or 2 PowerPoint presentations related to the assigned chapter readings. In these presentations, I'll synthesize and expand on information from the textbook. Therefore, to fully appreciate those presentations, **you'll need to have read the assigned chapters ahead of time.**

Surveys

I'll post **Surveys 1 & 2** early in the semester with no preparation required because I only want your opinions. You will get 100% credit IF you answer all questions honestly. However, **Survey-3**, given at the end of the semester, *will be graded as a quiz*, with only one correct answer per question (see *Quizzes* below). **Survey-3** questions will be identical to those in **Survey-1**. So after taking **Survey-1**, it would be wise to discuss those questions with your classmates in the **ChatRoom** to prepare for **Survey-3**. (See my recommendations for helping each other in *Quizzes* below.)

Quizzes

We'll have about **six unproctored, low-pressure, open-book/open-notes 20-point quizzes** posted on Canvas with multiple choice, matching, or T/F questions based on information in the assigned chapters. You'll have a week to complete them, with no time limit except the deadline. I allow retakes, but you won't see your score until after the deadline. I allow *and encourage* students to collaborate on quiz questions in the **ChatRoom** discussion forum. Collaborating with your classmates will improve your chances of acing the quizzes, and everyone in the class will benefit from the discussion as well. If you retake a quiz one or more times, I'll grade only the last retake. Please note that missed assignments are graded as zero, so don't fail to finish the quizzes on time. And it's wise to finish them early because that will give you time to discuss any questions you found difficult.

Exams

There will be four 100-point exams posted on Canvas, and *like the quizzes*, they are **unproctored, open-book, and open-notes**, and you can take them anywhere you can find a WIFI connection (even on your smartphone). However, *unlike quizzes*, 1) exams, once posted, **cannot be discussed** with anyone, 2) once you start you'll have **3-hours to finish** (some students finish in less than an hour), and 3) there are **no retakes**. Each exam will be available from 8am on a Thursday until midnight the following Saturday, and you can start anytime during that period. But once you start you must finish within the 3-hour time limit, and it will close at midnight Saturday, so be sure to start by or before 9pm Saturday night. The multiple choice, matching, and T/F questions are created mainly from information in my presentations, although some questions may come from the quizzes. I don't create questions from material I haven't personally addressed in the presentations or quizzes. Although each exam will mainly cover material presented since the previous exam, you are expected to retain the major concepts already covered. Missed assignments are graded as zero, and a missed exam will severely lower your final grade. All quizzes and exams will be scheduled in your Canvas Calendar the first week of class, so plan your semester accordingly. (See *No Late Work Accepted Without Prior Approval* below.)

Discussions

You'll participate in about five discussions. To earn full credit, **you must post at least 1 original entry and 2 replies to other discussion entries**. All graded entries (originals *and replies*) should be concise and well-written essays of your own ideas, between 100 and 250 words that are thoughtful, focused, and germane to the topic. Your graded entries should add to *and extend* the conversation rather than just expressing agreement and repeating the same ideas. In your replies, explain why you agree or disagree with someone's entry, and clarify your points with examples. Your goal is to learn about the science by discussing topics in the assigned articles.

You are free to be creative in your approach to these topics, *as long as your essays address the science in the article*. For example, you might explain what you learned and whether you think that information is valuable. If you think the findings are important, tell us why you think so. If you find the information difficult to understand, focus on the parts you do understand. Or describe the sections you found difficult and ask clear and *specific* questions about those topics so your classmates and I can help you understand them better. And feel free to criticize the articles. If you think the science is questionable, tell us why you think so. A thoughtfully skeptical approach can stimulate great discussion.

Express your views as clearly as possible and hopefully you'll get feedback that will help you gain a deeper understanding of the subject. I don't grade heavily on the correctness of your ideas, but instead on clearly and concisely composed ideas (you can be wrong but get full credit for a well-written essay). Focus your essays on a single theme, and support your ideas with examples and references where needed. Edit your draft entries carefully and repeatedly for good grammar, clarity, conciseness, and focus *before posting*. You should have one or more people proofread your entries to clean up spelling and grammatical mistakes, and (more importantly) to ensure you are expressing your ideas effectively. Even though *you* may understand what you've written, if others don't, your draft is not ready to post.

Two last recommendations: first, your entries must be **your ideas in your own words**. Plagiarism (copying the ideas of others as your own) is a serious academic infraction (see *Academic Dishonesty* below). Second, it's vital that we treat each other respectfully. Our goal is to learn, not to win arguments. We're fortunate to have this opportunity to engage in serious, intellectual dialogue with people who have different backgrounds and experiences. A diversity of opinions (including respectful disagreements) contributes to learning. Unfortunately, aggressive disrespect has become a popular approach to online discussions, making those discussions achingly unproductive. So let's defy that trend and treat each other respectfully.

COURSE AND UNIVERSITY POLICIES

Communication/Feedback

Most weekdays I'll post an **Announcement** in Canvas, usually before noon, offering reminders (of assignment due-dates, upcoming events, etc.) and other course information. I'll also be reading your entries to the assigned discussions and replying occasionally. If you need to contact me privately, please email me at mwe.evolve@gmail.com and I'll respond by email **within 1 week on a weekday** (probably sooner). If you need to call me, my number is **435-258-6305** and it has voicemail. I welcome feedback, and during the last two weeks of the course, you'll be emailed a link to a **Course Evaluation** site where you can give direct feedback anonymously (for 5 extra-credit points).

Science is an amazingly productive *collaborative* enterprise, and I want you all to act as scientists by collaborating to help each other understand evolution. We'll have a discussion forum for this purpose called the **ChatRoom** where you can ask questions and get help quickly on just about anything (from how to use Canvas to questions about evolutionary biology). I'll answer your questions in the **ChatRoom** so that *everyone can benefit* from the exchange rather than just the person with the question. The **ChatRoom** is my virtual office, and the entire class will benefit from any discussions that I have there with each of you. The **ChatRoom** is better than office hours since your classmates will often respond with good answers before I do, and in that way we can all be part of a collaborative team this semester, which will help raise the average grade for the entire class.

No Late Work Accepted Without Prior Approval

Consider your enrolment in Biol-3010 as a job position. Just as your company would lose money for missing deadlines, you will lose points as a student. Miss too many deadlines and you'll lose your job (i.e. fail the course). However, if you experience a legitimate emergency (according to my standards) that prevents you from completing required coursework in the time period allotted, you or someone you know must contact me at the earliest opportunity before the assignment deadline. Email or call me with the nature of the emergency and when you expect to complete the coursework. Include your phone number and the best time to call. Weddings, vacations, and funerals are not emergencies because: 1) exams have three days for completion and quizzes seven days; 2) quizzes and exams can be taken anywhere WIFI is available; and 3) you can even complete quizzes and exams on your smartphone wherever a signal exists.

All assignments have extended periods for completion in order to make scheduling your time flexible and easy. But if you miss a deadline, your score will be zero. The due date and time associated with each assignment will be stated clearly in the Canvas **Assignments**, **Calendar**, and **Syllabus** pages, and I usually give multiple reminders in my **Announcements**. Explaining why you missed an assignment after the deadline has passed is not the approach to take.

An online course with unproctored quizzes and exams enables you to take our tests anywhere you can find an internet connection or smartphone access. My students often take these assignments while on the road. You can find WIFI connections in coffee shops, libraries, internet cafés, hotels, airports, etc. I taught an entire semester from coffee shops while living in Costa Rica with no home internet (I got kinda fat eating coffee-shop snacks, but you do what you have to do!). If you don't have a laptop with WIFI capability, you can use a computer in a public library. Taking multiple-choice quizzes and exams with a smart phone is also easy.

Traveling, weddings, and funerals are normal realities of life. All quizzes and exams are scheduled in your Canvas Calendar. So check that schedule during the first week and decide if your schedule allows you to take Biol-3010.

Honor Pledge

Students will be held accountable to the **Honor Pledge**, which all USU students have agreed to: "I pledge, on my honor, to conduct myself with the foremost level of academic integrity."

Academic Dishonesty

The Instructor of this course will take appropriate actions in response to academic violations, as defined in the [USU Code of Policies & Procedures for Students](#) (see specifically [Article VI section VI-3](#) of the Student Code of Conduct). Acts of academic dishonesty include but are not limited to:

1. **Cheating:** (a) using or attempting to use or providing others with any unauthorized assistance in taking quizzes, tests, examinations, or in any other academic exercise or activity, including working in a group when the instructor has designated that the quiz, test, examination, or any other academic exercise or activity be done "individually"; (b) depending on the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; (c) substituting for another student, or permitting another student to substitute for oneself, in taking an examination or preparing academic work; (d) acquiring tests or other academic material belonging to a faculty member, staff member, or another student without express permission; (e) continuing to write after time has been called on a quiz, test, examination, or any other academic exercise or activity; (f) submitting substantially the same work for credit in more than one class, except with prior approval of the instructor; or (g) engaging in any form of research fraud.
2. **Falsification:** altering or fabricating any information or citation in an academic exercise or activity.
3. **Plagiarism:** representing, by paraphrase or direct quotation, the published or unpublished work of another person as one's own in any academic exercise or activity without full and clear acknowledgment. It also includes using materials prepared by another person or agency engaged in the sale of academic materials.

Special Needs

Students with ADA-documented physical, sensory, emotional or medical impairments may be eligible for reasonable accommodations. Veterans may also be eligible for services. All accommodations are coordinated through the Disability Resource Center (DRC) in Room 101 of the University Inn, 435-797-2444 voice, 435-797-0740 TTY, 435-797-2444 VP, or toll free at 800-259-2966. Please contact the DRC as early in the semester as possible. Alternate format materials (Braille, large print, or digital) may be available with advance notice.

Course Fees

There are no additional fees associated with this course.

Course Calendar

When you log into [Sp17 BIOL-3010-XL](#), click the **Calendar** link in the left-side vertical dark-blue main menu. Check this calendar regularly, as I update it weekly. However, the dates for all quizzes and exams are set for the entire semester. If you feel that your personal schedule during the semester will conflict with these quiz and exam dates, then you should not sign up for the course. Weddings, vacations, volunteer trips, educational seminars, or other valuable experiences and important plans are not activities that I will approve for missing these assignments. Fortunately, access to an internet connection is nearly always close by wherever we go. So unless you go to the Moon, your plans should not prevent you from completing assignments. If you decide to take this course, go through our Canvas Calendar now and schedule those quizzes and exams.

COURSE SCHEDULE

See **Calendar** in Canvas after the semester begins.

GRADING

Your grade will be based strictly on the points and percentages in the tables below. Don't miss any assignments because I do not give extra credit or other opportunities to improve grades. So throughout the semester, keep track of your scores and your current percentage (which will be posted in real time in your Canvas **Grades** page). Although we may have more or fewer assignments than I've listed below, that table of assignments is typical for this course (please note that I drop the lowest quiz score). At the end of the semester I'll update this table if necessary.

POINTS TABLE

Assignments	Points
Four 100pt exams (4 x 100)	400
Six 20pt quizzes (the lowest score dropped, 5 x 20)	100
One 5pt survey, one 10pt survey, & one 20pt survey/quiz	35
Five 15pt Discussions (5 x 15)	75
Total Points	610

Your final letter grade will be based strictly on the percentage ranges below. However, I round scores of *.5% or higher up to the next whole-number percentage (e.g. 92.5% would round up to 93%, while 92.4% would round to 92%).

LETTER GRADE TABLE

Grade	Percentage Range
A	93 – 100%
A-	90 – 92%
B+	87 – 89%
B	83 – 86%
B-	80 – 82%
C+	77 – 79%
C	73 – 76%
C-	70 – 72%
D+	67 – 69%
D	60 – 66%
F	<60%