

INSTRUCTOR

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This course is entirely online, with students spread across the state, the country, and sometimes the world. With students from many different time zones, and because I live in Hawaii, I don't hold physical office hours. However, I'm nearly always available via email, telephone, or (ideally) in our **ChatRoom** discussion forum (see *Communication/Feedback* 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 expanded exponentially as has the explanatory and predictive power of evolutionary theory. This semester, we'll learn about the origins of, and 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 various aspects and components of the evolutionary process that are highlighted by that research. We'll also learn how to recognize and evaluate valid evidence.

COURSE OBJECTIVES

Students will:

- learn about the history of ideas regarding the origins and expansion of biodiversity
- learn the critical elements of modern evolutionary theory
- examine components & processes underlying 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 recognized
- 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 and also how to recognize pseudoscience (*real* "fake news").

COURSE RESOURCES

Canvas

Log into our [Sp20 BIOL-3010-Online](#) course with your A# and your global USU password. That should bring up 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 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 you'll need to open. To return to the **Home Page**, click **Home** in the left-side submenu or click the [Sp20 BIOL-3010-Online](#) link in the top-left corner of most Canvas pages.

Software

Documents and presentations will be presented as URLs, DOCs, PDFs, PPTs (Powerpoints), MP3s, or MP4s. PDF files can be viewed with the free [Adobe Reader](#) (or other PDF programs). PPTs and DOCs can be viewed with Microsoft software ([Office 365](#) is free for students). There are also a number of [free office suites](#) (like [Apache Open Office](#) and [Libre Office](#)) that can 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 that will open and play most audio and video files is [VLC](#).

Textbook

Get the 4th edition, 2007, of *Strickberger's Evolution* by Brian Hall and Benedikt Hallgrímsson, Jones & Bartlett Publishers. You can usually get some very good deals, such as [here](#), [here](#), [here](#), [here](#), and [here](#) (for this last one, look for and click the light-green *Marketplace* link). If you purchase the text online, and it comes a week or two late, that won't be a problem. **Be sure to get the 4th edition** (*not the 5th*)! A used textbook is fine. There may be some at the USU bookstore as well. If you can't find it, be sure to let me know during the first week of class.

Additional Reading Materials

Besides textbook chapters, other course sources will include articles from peer-reviewed science journals, online presentations, etc., presented as PDFs, DOCs, videos on Canvas, or accessible hyperlinks. New discoveries are constantly being made that enhance our knowledge of biology, 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

During 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 and 2** early in the semester. No preparation will be necessary since I want your personal opinions. You'll 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), and the questions will be identical to those in **Survey-1**. So after taking **Survey-1**, it would be wise to discuss each of those questions with your classmates in the **ChatRoom** during the semester to prepare for **Survey-3**. See my recommendations for collaborating in *Quizzes* below.

Quizzes

We'll have about **6 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 each, with no time limit (except the deadline). I allow retakes, but you won't see your score until after a quiz closes. I allow *and encourage* student collaboration on quiz questions in the **ChatRoom** to improve your chances of acing the quizzes. Everyone will benefit from those discussions. If you take a quiz more than once, I'll only grade your last attempt (even if previous attempts had higher scores). Please note that any missed assignments are graded as zero, so don't fail to finish the quizzes (and all assignments) *on time*. It's wise to finish quizzes early to give yourself time to discuss any questions that you found difficult in the **ChatRoom**. Then you'll have time to take the quiz again if you need to.

Exams

There will be four 100-point exams posted on Canvas. Like the quizzes, they'll be **unproctored, open-book, and open-notes**, and you can take them anywhere you can find a WIFI connection. You can even use your smartphone to take a quiz or an exam. However, *unlike quizzes*, 1) once an exam opens it **cannot be discussed** with anyone until it closes; 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. Since it will close at midnight Saturday, be sure you start by or before 9pm Saturday night to ensure you'll have the full 3 hours allotted. 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. However, although each exam will mainly cover material presented since the previous exam, you are expected to retain the major concepts already covered. All quizzes and exams will be scheduled in your Canvas Calendar, so plan your semester accordingly *so you don't miss them* (a zero on a 100-point exam will severely impact your final grade). See **No Late Work Accepted Without Prior Approval** below.

Discussions

Serious, thoughtful discussions are the heart of this course. If you don't like participating in serious discussions, either plan to learn how or consider taking another course. For each discussion, you must provide **at least 1 original entry and 1 replies**. Each entry should be a thoughtful, focused essay of your own ideas, between 125 and 250 words, with a thesis that is germane to the assigned topic. Your essay should *extend* the conversation rather than just expressing agreement or repeating someone else's ideas. In your replies, explain why you agree or disagree with someone's entry, but then extend the discussion with clear points, specific examples, and references where needed.

Every discussion except the first one will be based on an assigned article, and your goal is to *learn about the science* in that article by discussing topics it raises. You can approach any topics that interest you *as long as you address aspects of evolution*. For example, if you think the findings in the article are "interesting," you must *tell us why* you think so. If you find some information difficult to understand or you have questions about what you read, do some research on those topics and then tell us what you learned. If you can't find satisfactory answers, present those questions to the class so the rest of us can help you. *And feel free to criticize the articles* (the methods, results, or findings). If you think the science is questionable, tell us why you think so. A thoughtfully skeptical approach to the articles can stimulate great discussion.

I don't grade heavily on the correctness of your ideas, but instead on the clarity and conciseness of your ideas. Your entries should, therefore, be **essays** – which focus on and develop a single thesis. Edit your draft entries repeatedly for good grammar, clarity and conciseness *before you post your entry*. 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. Although you may understand what you've written, if others don't, *your draft ain't ready*.

Two last items. **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). Also, quoting other authors is almost never necessary (unless you need to prove what they said), and quotations won't be considered part of the 125-word minimum. **Second**, it's vital that we treat each other respectfully. *Our goal is to learn*, not win arguments. We're fortunate to have this opportunity to engage in serious, intellectual dialogue between people with different backgrounds, cultures, experiences, and viewpoints. A diversity of opinions contributes to learning. Unfortunately, aggressive disrespect has become a popular approach to online discussions, making those conversations 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. Three weeks before Finals, you'll be emailed a link to a **Course Evaluation** site where you can anonymously offer feedback on what you thought of Biol-3010. I welcome feedback, and anyone who completes the evaluation will get 5 extra-credit points.

Science is an amazingly productive *collaborative* enterprise, and I want you all to act like scientists by collaborating to help each other understand evolution. In the discussion forum called the **ChatRoom** you can ask questions and get help quickly on just about anything from how to use Canvas to questions about evolutionary biology. The **ChatRoom** is my virtual office where I can answer any and all questions. And because the **ChatRoom** is open to the entire class, *everyone can benefit* from the exchange rather than just the person with the question. And your classmates will often respond with good answers before I do. 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 assignments 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. If you are enrolled in this online course, I'll assume you have the necessary devices.

Traveling, weddings, and funerals are normal realities of life. All quizzes and exams are scheduled in your Canvas Calendar. So check the schedule during the first week of class 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 the various sections in [Article VI](#) of the Student Code of Conduct, such as Section VI-3). 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

All online courses through Utah State University have a \$15/credit online course fee. There are no other fees for Biol-3010.

Course Calendar

When you log into [Sp20 BIOL-3010-Online](#), 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 have already been 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 important plans are not activities that I will approve for missing these assignments. Fortunately, each assignment can be taken over a range of time, allowing you great flexibility. In addition, access to an internet connection is nearly always close by wherever any of us go in the world. So unless you take a trip to the Moon, your plans should not prevent you from completing the assignments. If you decide to take this course, go through our Canvas Calendar now and schedule those quizzes and exams.

COURSE SCHEDULE

See the Canvas **Calendar** once 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 additional 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 (however, I may make adjustments to the assignments and points listed). Please note that I drop the lowest quiz score.

POINTS TABLE

Assignments	Points
Four 100pt exams (4 x 100)	400
Six 20pt quizzes (the lowest score is dropped, so 5 x 20)	100
One 10pt survey, one 5pt survey, & one 20pt survey/quiz	35
Five 14pt Discussions (5 x 14)	70
Total Points	605

LETTER GRADE TABLE

Grade	Percentage Range
A	100 – 93%
A-	<93 – 90%
B+	<90 – 87%
B	<87 – 83%
B-	<83 – 80%
C+	<80 – 77%
C	<77 – 73%
C-	<73 – 70%
D+	<70 – 67%
D	<67 – 60%
F	<60%