Master Course Syllabus

For additional course information, including prerequisites, corequisites, and course fees, please refer to the Catalog: https://catalog.uvu.edu/

Semester: Spring
Year: 2025
Course Prefix: BIOL
Course and Section #: 101H SECTION #001
Course Title: General Biology
Credits: 3

Course Description

Introduces major themes and concepts of biology including cell and molecular biology, genetics, diversity, evolution, and ecology. Provides students with necessary information and skills to critically evaluate what they hear, read, and see in the living world; communicate clearly; and apply methods to interpret data for making informed decisions concerning the role of biology in a world of which they are a part. This course is an online, asynchronous course, and is thus largely self-directed learning. *This course fulfills a general education requirement within the UVU undergraduate curriculum to provide a well-rounded, fundamental education to all UVU students but does not count towards a biology degree. This is the Honors section – even though it is open for all students to enroll, be aware that if you are not an honors student and enroll in this section, you will still be required to complete all assignments and elements of this section.*

This course is a hybrid course -- with content delivered asynchronously and meeting weekly via Livestream on MS teams Wednesdays from 1 - 2:15 pm for discussion requisite of the Honors section. Our Wednesdays will be devoted to reading, discussion, and reflection of Charles Darwin's "On the Origin of the Species" 1st edition book -- will read, write about, and discuss approximately one chapter a week.

Course Attributes

This course has the following attributes:
☒ General Education Requirements
☐ Global/Intercultural Graduation Requirements
☐ Writing Enriched Graduation Requirements
☐ Discipline Core Requirements in Program
☐ Elective Core Requirements in Program
☐ Open Elective
Other: Honors course

Instructor Information

Instructor Name: Dr.

Student Learning Outcomes

1. Differentiate science as a way of knowing about the world and other forms of knowing.

2. Be able to make decisions based on evidence. Evaluate evidence and solve problems by using scientific thinking skills.
3. Apply your understanding of scientific literacy and citizenship to issues of today, such as evolution, human population growth, genomic medicine, climate change, GMOs, vaccination and disease, ecosystem health and conservation, among others.
4. Demonstrate why evolution is the cornerstone of modern biology, uniting the main topics of cell, molecular biology, genetics, organismal biology, and ecology.
5. Apply your knowledge of the interconnectedness of all life and the environment to your personal attitudes and actions concerning the health of this planet.

Course Materials and Texts

Software:

- **Computer Access** – You will want to use an actual computer for this course. I cannot guarantee that other devices (tablets, phones, etc.) will display the required material in quizzes and exams. If you use a tablet or a phone, you use it at your own risk. I will not change a grade for problems you experience if you don't use a computer. Computers can be accessed on campus through UVU Academic Labs.
- **Proctorio Web Proctoring Exam Program** – This program will be used to take Exams 1, 2, 3, and the final. A tutorial for downloading and using the program is found in the first introductory module on the course Canvas page. This program requires that you be using **Google Chrome web browser with the Proctorio extension installed.**
- **Microsoft Teams access** -- please ensure that you can access our Team in MS team for the course. Note that you must login to this platform using studentID@uvu.edu . I am not able to help you troubleshoot this. Should you need help, please contact UVU OTL at 801-863-8255. As of Fall 2021, you should be able to access our MS Teams through canvas using the link in the left-hand navigation panel.
- **Word Processing Program** – A word processing program that saves in .doc, .docx or .pdf format is required. I cannot access .pages.

Textbook:

- **Campbell Essential Biology, 7th Edition** by Simon, Dickey, and Reece
- **ISBN-13:** 978-0134765037
- **You will only need the textbook itself** for this course. Purchasing additional access codes for an online homework system is not required for this course.
- **The above textbook is the best resource for your learning journey, however, other readings are available on canvas should you choose not to purchase the textbook** - but I strongly recommend the text! If you do purchase the text, the other readings on canvas can offer supplemental help should you choose to use them.

Book for Discussion:

- **On the Origin of Species, 1st edition –** Charles Darwin. If you wish to have a hardcopy - please purchase this as soon as possible - **the 1st edition only** - we will be reading the 1st edition – as this was written for a more general audience! Otherwise, we do have a number of avenues for digital copies available through websites, etc:
    - 1st edition of "*Origin of Species*" (1859) online: http://darwin-online.org.uk/content/frameset?itemID=F373&viewtype=side&pageseq=1
    - Complete works of Darwin online: http://darwin-online.org.uk/

- Works of Darwin from The Unofficial Steven J. Gould Archive: http://www.aboutdarwin.com/literature/lit_01.html
- https://darwin-online.org.uk/content/frameset?itemID=F373&viewtype=side&pageseq=1

Additional Resources and Readings (Optional):

- "Blogging the Origin" - written by a freelance science writer who is working through the *Origin of Species* (now has just completed the 14th and final chapter) and posting about each chapter: http://scienceblogs.com/bloggingtheorigin/
- Wikipedia discussion of Darwin: http://en.wikipedia.org/wiki/Charles_Darwin
- Wikipedia discussion of the "*Origin of Species*": http://en.wikipedia.org/wiki/Origin_of_species
- Joint paper of Darwin & Wallace read at Linnean Society June 30, 1858: http://darwin-online.org.uk/content/frameset?itemID=F350&viewtype=text&pageseq=1
- Darwin on Species and Speciation. Compiled by James Mallet, page numbers from the Ernst Mayr 1964 facsimile of the first edition: http://www.ucl.ac.uk/taxome/jim/Mim/darwin_on_spp.html
- Darwin Correspondence Project: http://www.darwinproject.ac.uk/

Canvas:

You will want to familiarize yourself with Canvas Instructure (our online course platform). **I have posted a video in the course orientation module to help you learn your way around in canvas**. **If you use a different email than your uvu email, please link your uvu email to forward to your personal email. I will be using announcements in canvas to help keep you up-to-date in this class, therefore you must either be checking your uvu email daily or forward your uvu email to your personal email. These announcements are critical to your success in the class!** The UVU Canvas website has an array of information. The Office of Teaching and Learning student resources web page is another good resource. If you need technical support, Instructure's Canvas support is available 24/7 and can be reached at 385-204-4930 via live help by clicking on the live help icon on the Global Navigation Menu in Canvas or via email to support@instructure.com.

Modules:

The course will be split into a series of modules among 4 units. The modules consist of PowerPoints, lecture videos, reading material, quizzes, assignments, etc. The modules for a unit will open on the first day of the unit, and the assignments in them due weekly. See the course schedule in Canvas for the weekly schedule. You may not move onto the next module in a unit until you complete the previous module. You may work ahead in the modules for the unit if you wish, but you cannot work past the current unit. Please get used to accessing course content via Module view. **You should be spending most of your time in module view – not in calendar or To-do List. Modules provide a host of learning resources that you will miss without working in Module view!**

NOTE: There may be more than one module due each week! See the course schedule for which module(s) are assigned each week.

Lectures:

The lecture videos for this online course were created by various UVU Biology faculty. Even though some lecture videos are from faculty that are not the instructor of this course, all questions from this class should be directed through the "Raise Your Hand" discussion pages within each module to the instructor of your section. Each module will have at least one lecture video for you to watch and study from. These **lecture videos are required content and contain info that you will be quizzed and tested on!** Please watch them!

Course Requirements

Course Assignments, Assessments, and Grading Policy

Quizzes (25% of Final Grade)

At the end of each module you will have a quiz to complete. (Occasionally you will have more than one quiz in a module.) **Quizzes cover content from all learning materials, not just lecture videos. Material included in quizzes can come from your readings, lecture videos, or assignments.** Quiz questions can vary from multiple choice, matching, short answer, etc. Some quizzes will have graphics, so it is important you take them on a computer as other devices may not display the graphics correctly. As mentioned previously, I will not change a grade for problems you experience if you don't use a computer, so use any other device at your own risk. **Your lowest two quiz scores will automatically be dropped.** However, no quizzes worth 20 points will be dropped regardless of your score.

Exams (25% of Final Grade)

Exams cover content from all learning materials, not just lecture videos. Material included in exams can come from your readings, lecture videos, or assignments. You will have 3 midterm exams for this course. The exams will encompass 25% of your grade and will be assessed at the end of each unit in the course. The exams require the use of Proctorio and the Google Chrome Web Browser. You will not be able to take the exams unless you are in Google Chrome and have installed the Proctorio extension. Each exam has a different amount of questions and different time limits. Make sure to read the instructions on the exam page, before you start taking the exam. **NOTE: Make sure to give yourself time for the exams in case you run into any problems. The exams won't be reopened for technical difficulties or if you run out of time. Cheating on any exam will have serious consequences - at a minimum receiving a zero for that exam, at a maximum failing the course and being reported to Student Conduct.**

Assignments (30% of Final Grade)

While you work through the course you will have various assignments and discussion posts to complete. Assignments are found in the modules and are due weekly. **Although all assignments are due on Sunday at the end of the week, you are encouraged to turn things in during the week – make your own schedule to pace yourself as you need within the framework of the course.** The assignments will correlate directly with the module topic(s) for the week. **Your lowest two assignment scores will automatically be dropped**. However, no assignments worth 20 points will be dropped regardless of your score.

Discussions: Some modules in this course will require a graded discussion assignment regarding current events in biology. Follow the directions on the discussion post. Typically, for full points, you will have to thoughtfully respond to the discussion prompt in 1 to 2 paragraphs and thoughtfully respond to another student's post in 1 to 2 paragraphs. **Please respond with directed comments, not just I agree with you or I liked your post - justify why you do so**. You may disagree of course, but please be courteous to your peers in responses. Posts will be reviewed and/or deleted when they include offensive language, sentences that are written in all capital letters (that is essentially yelling in text form), or any other breach of etiquette.

Honors section-specific assignments:
Metacognitive/Reflective Writings – Prior to each class, you will be required to read a chapter(s) of *The Origin of Species* according to the schedule below and respond to a series of reflective prompts in a short reflective writing of no less than 500 words. These reflections shall be turned in *before class* and are not accepted late – as this is a time for me to ensure you are doing the readings and also thinking and formulating ideas prior to class discussion.

Discussion Leader – Each student shall be in charge of leading the discussion for one day of the semester. Feel free to use the reflective prompts to help guide discussion, but you must also *provide 2-3 additional questions that expand or follow up on the reflective prompts.* You will be in charge of keeping discussion going, fostering communication, and drawing in participation from your fellow students. *Please consider reading the Advice for students on discussions* in canvas to help in your preparation and reading over the rubric assessment provided.

Class Attendance & Participation – Each day we will discuss the prior readings and reflective questions, in addition to extra questions posed by the leader of that discussion. You are required to attend the Livestream discussion class and participate. You will accrue both attendance *and* participation points each class. Failure to attend and/or participate will lead to a loss of points for that day.

Final Exam (20% of Final Grade)

The final exam will be open for two or three days depending on semester. The final exam will be taken online at home, using Proctorio and the Google Chrome web browser. I am trusting you to have integrity as a student. **Failure to take the final exam will result in an automatic 'E' grade. No exceptions.**

Drop-in Virtual Q&A sessions (optional, not graded):

Once per week, I will hold a virtual drop-in question and answer session on Microsoft Teams. These sessions are driven by you, the students, who come with questions about the weeks' topics. Come prepared, having read the chapter and watched the lectures and come with questions - this is optimal for your learning. Other students come simply to listen to the questions and responses from others - this is good but not as effective as coming prepared! In any case, this is a wonderful opportunity to further your learning! **You may access MS teams through canvas via the link on the left-hand navigation.** These optional drop-in sessions are technically my office hours and will not be recorded. They are optional and not graded. Review sessions prior to each exam will be recorded and made available.

Final Grade

Your final grade will be based on the following table.

Grade	Percent	Grade	Percent	Grade	Percent	Grade	Percent
A	93-100	B	83-87	C	73-77	D	63-67
A-	90-93	B-	80-83	C-	70-73	D-	60-63
B+	87-90	C+	77-80	D+	67-70	E	<60

Required or Recommended Reading Assignments

To find which chapters you should be reading and when, refer to the course schedule on the Canvas home page, at the end of this syllabus, and/or listed in the modules. Some modules will require you read only one chapter, others require multiple. The textbook is designed to help solidify the material you learn from the lectures and assignments and be a study aid when it comes to taking quizzes and exams. Each module has readings listed within it that are complementary to the textbook chapters. You can choose to read the pages included in canvas or the associated textbook chapter, or both.

General Description of the Subject Matter of Each Lecture or Discussion

See schedule at the end of the syllabus**.**

Required Course Syllabus Statements

Generative AI

**adapted from Temple University statement on AI in classes.*

AI programs are not a replacement for your human creativity, originality, and critical thinking. Writing, thinking, and researching are crafts that you must develop over time to develop your own individual voice, learn and develop as a person, and gain transitional skills required for job success. At the same time, you should learn how to use AI and in what instances AI can be helpful to you.

The use of generative AI tools (e.g. Grammarly, ChatGPT, Google Gemini, etc.) is permitted in this course for the following activities:

- Brainstorming and refining your ideas;
- Fine tuning your research questions;
- Finding information on your topic;
- Drafting an outline to organize your thoughts; and
- Checking grammar and style on sentences, or paragraphs. **NOTE: Grammarly use on a paper will be detected by UVU's plagiarism detection software and result in a call of 100% influenced by AI. This will be grounds for failing the assignment** and potentially failing the course. My advice – just don't use it!

The use of generative AI tools is not permitted in this course for the following activities:

- Impersonating you in classroom contexts, such as by using the tool to compose discussion board prompts/responses assigned to you or content that you put into a Teams/Canvas chat.
- Completing group work that your group has assigned to you.

- Writing any draft of a writing assignment, discussion assignment or short answer to case studies.
- Writing entire sentences, paragraphs or papers to complete class assignments.

You are responsible for the information you submit based on an AI query (for instance, that it does not violate intellectual property laws, or contain misinformation or unethical content). **Your use of AI tools must be properly documented and cited in order to stay within university policies on academic honesty.** I am aware that AI-based plagiarism can be both intentional and unintentional. However, because the UVU approved detection software does not distinguish between intents, **any detection of AI will be considered intentional if not cited properly**. **I reiterate – it is your responsibility to stay within the parameters of acceptable AI use as stated herein!** Consequences are at my discretion – with likely loss of points for the assignment and reporting to academic integrity office for multiple infractions. In those rare instances where AI use is approved for an assignment, any student work submitted using AI tools should clearly indicate what work is the student's work and what part is generated by the AI. In such cases, **no more than 25% of the student work should be generated by AI**. If any part of this is confusing or uncertain, please reach out to me for a conversation before submitting your work.

Using Remote Testing Software

☒ This course uses remote testing software. Remote test-takers may choose their remote testing locations. Please note, however, that the testing software used for this may conduct a brief scan of remote test-takers' immediate surroundings, may require use of a webcam while taking an exam, may require the microphone be on while taking an exam, or may require other practices to confirm academic honesty. Test-takers therefore shall have no expectation of privacy in their test-taking location during, or immediately preceding, remote testing. If a student strongly objects to using test-taking software, the student should contact the instructor at the beginning of the semester to determine whether alternative testing arrangements are feasible. Alternatives are not guaranteed.

Required University Syllabus Statements

Accommodations/Students with Disabilities
Students needing accommodations due to a permanent or temporary disability, pregnancy or pregnancy-related conditions may contact UVU Accessibility Services at accessibilityservices@uvu.edu or 801-863-8747. Accessibility Services is located on the Orem Campus in BA 110. Deaf/Hard of Hearing students requesting ASL interpreters or transcribers can contact Accessibility Services to set up accommodations. Deaf/Hard of Hearing services can be contacted at DHHservices@uvu.edu DHH is located on the Orem Campus in BA 112.

Academic Integrity
At Utah Valley University, faculty and students operate in an atmosphere of mutual trust. Maintaining an atmosphere of academic integrity allows for free exchange of ideas and enables all members of the community to achieve their highest potential. Our goal is to foster an intellectual atmosphere that produces scholars of integrity and imaginative thought. In all academic work, the ideas and contributions of others must be appropriately acknowledged and UVU students are expected to produce their own original academic work.

Faculty and students share the responsibility of ensuring the honesty and fairness of the intellectual environment at UVU. Students have a responsibility to promote academic integrity at the university by not participating in or facilitating others' participation in any act of academic dishonesty. As members of the academic community, students must become familiar with their rights and responsibilities. In each course, they are responsible for knowing the requirements and restrictions regarding research and writing, assessments, collaborative work, the use of study aids, the appropriateness of assistance, and other issues. Likewise, instructors are responsible to clearly state expectations and model best practices.

Further information on what constitutes academic dishonesty is detailed in UVU Policy 541: *Student Code of Conduct*.

Equity and Title IX
Utah Valley University does not discriminate on the basis of race, color, religion, national origin, sex, sexual orientation, gender identity, gender expression, age (40 and over), disability, veteran status, pregnancy, childbirth, or pregnancy-related conditions, citizenship, genetic information, or other basis protected by applicable law, including Title IX and 34 C.F.R. Part 106, in employment, treatment, admission, access to educational programs and activities, or other University benefits or services. Inquiries about nondiscrimination at UVU may be directed to the U.S. Department of Education's Office for Civil Rights or UVU's Title IX Coordinator at 801-863-7999 – TitleIX@uvu.edu – 800 W University Pkwy, Orem, 84058, Suite BA 203.

Religious Accommodation
UVU values and acknowledges the array of worldviews, faiths, and religions represented in our student body, and as such provides supportive accommodations for students. Religious belief or conscience broadly includes religious, non-religious, theistic, or non-theistic moral or ethical beliefs as well as participation in religious holidays, observances, or activities. Accommodations may include scheduling or due-date modifications or make-up assignments for missed class work. To seek a religious accommodation, a student must provide written notice to the instructor and the Director of Accessibility Services at accessibilityservices@uvu.edu. If the accommodation relates to a scheduling conflict, the notice should include the date, time, and brief description of the difficulty posed by the conflict. Such requests should be made as soon as the student is aware of the prospective scheduling conflict. While religious expression is welcome throughout campus, UVU also has a specially dedicated space for meditation, prayer, reflection, or other forms of religious expression.

Course Schedule: These due dates and schedule are not fixed and are subject to change at the discretion of the instructor.

*****PLEASE NOTE:** Make sure to pay attention to dates, as they aren't all one week! Also, quizzes associated with lecture videos are not listed here, but are still required!

Week/Date	Module Topics / Events	Assignments to Complete	Textbook Chapter
Week 1 6 -- 12 Jan	Course Orientation and Introduction How to Learn and Love Biology	Introduction Video Proctorio Exam Quiz Syllabus: Quiz Student Learning Contract	1

	What is Life?	Discuss: Learning and Science Reflection: Your Study Plan What is Life? Learning About Life: Quiz	
Week 2 13 -- 19 Jan	Essential Chemistry for Biology The Molecules of Life	Properties of Water Essential Chemistry for Biology: Quiz Protein: Assignment The Molecules of Life: Discussion The Molecules of Life: Quiz The Molecules of Life: Assignment	2 3
Week 3 20 -- 26 Jan	A Tour of the Cell	Plant Cell vs. Animal Cell A Tour of the Cell: Discussion A Tour of the Cell: Quiz	4 5
Week 4 27 Jan -- 2 Feb	The Working Cell	Biomass Assignment Killing Chloroplasts Assignment The Working Cell: Quiz	6 7
2 -- 4 Feb	**EXAM 1 - Requires Use of Proctorio in Google Chrome Web Browser EXAM 1 - Due 4 Feb, at 11:59 PM**		
Week 5 3 -- 9 Feb	Cellular Reproduction: Cells from Cells Patterns of Inheritance	Cellular Reproduction: Cells from Cells: Quiz Pedigree: Assignment Patterns of Inheritance: Quiz Punnett Square Quiz	8 9
Week 6 10 -- 16 Feb	The Structure and Function of DNA	The Structure and Function of DNA: Quiz Transcription and Translation	10
Week 7 17 -- 23 Feb	How Genes Are Controlled Cancer	How Genes Are Controlled: Quiz Cloning: Assignment Cancer: Quiz	11
Week 8 24 Feb -- 2 Mar	DNA Technology HIV/Coronavirus	HIV and Evolution: Quiz Testing for COVID-19: Quiz DNA Technology: Quiz Bioethics of DNA-based Forensics	online in canvas & Chapter 12
28 Feb -- 2 Mar	**EXAM 2 - Requires Proctorio and Google Web Browser EXAM 2 - Due Mar 2, at 11:59 PM**		
Week 9 3 -- 9 Mar	History of Evolution	Darwin's Darkest Hour Evolution: Discussion History of Evolution: Quiz	online in canvas

10 – 15 Mar	**SPRING BREAK**		
Week 10 17 -- 23 Mar	Evolution Phylogenetics	Evolution: Quiz Phylogenetics: Quiz Case Study: Natural Selection Biology & Society Discussion	13 14
Week 11 24 Mar -- 30 Mar	Tree of Life - Part 1 Tree of Life - Part 2	The Evolution of Microbial Life: Quiz The Evolution of Plants and Fungi: Quiz The Evolution of Animals: Quiz	15 16 17
Week 12 31 Mar -- 6 Apr	Human Evolution	Human Evolution: Quiz	Online in canvas 17 (361-370)
5 -- 8 Apr	**EXAM 3 - Requires Proctorio and Google Web Browser** **EXAM 3 - Due 8 Apr, at 11:59 PM**		
Weeks 13 & 14 & 15 7 -- 22 Apr	Ecology	Ecology: Assignment Ecology: Quiz Rachel Carson Debate - Discussion Essay on Climate Change	18 19 20
24 -- 26 Apr	**FINAL EXAM - Due 26 Apr at 11:59 PM. the final exam will open 24 Apr and close 26 Apr (open for 3 days) -- Requires Proctorio and Google Web Browser**		