



**SYLLABUS for**  
**Biology 1030 Human Biology**  
Fall Semester 2021  
Monday and Wednesday 1:25 – 2:45  
ASB 210

**COVID information:**

- Current information about the university's response to COVID-19 can be found at: <https://coronavirus.utah.edu>
- On-campus vaccination information: <https://alert.utah.edu/covid/vaccine/>
- COVID testing information: <https://alert.utah.edu/covid-19-testing/>
- Self reporting forms: In order to help monitor the spread of COVID-19 and respond appropriately, the university requires that all students, faculty and staff complete a reporting form if they have been exposed to, are being tested for or have been diagnosed with COVID-19: [Self-reporting Form](#)
- Exposure guidelines: If you have been exposed to COVID-19, you should read and follow the guidelines posted at: [University COVID exposure guidelines](#)
- According to the CDC, wearing a mask remains an effective means of preventing infection for both unvaccinated and vaccinated people. Regardless of what someone chooses (mask or no mask), the university seeks to foster a sense of community and asks everyone on campus to be respectful of individual decisions on mask wearing.

**Vaccination:** While Utah law prohibits state universities from requiring COVID-19 vaccinations, all members of the University of Utah community are [encouraged](#) to receive a COVID-19 vaccine.

- Vaccination is proving highly effective in preventing severe COVID-19 symptoms, hospitalization, and death from coronavirus.
- Vaccinations are available to everyone 12 years and older. Appointments are open in the U of U Health system for patients as well as additional vaccine providers throughout Utah. For up-to-date campus vaccination information go to: <https://alert.utah.edu/covid/vaccine/>

## **Course Description:**

For Fall 2021, Biology 1030 will be meeting in person.

This course is intended for non-biology majors and provides an introduction to the biology of humans, including an examination of the evolution of our group of primates, physiology and biomechanics of the human body, implications to our health of the conflicts between our evolutionary life history and our modern lifestyle, an introduction to human behavior from the perspective of evolutionary psychology, and an exploration of humans as a force of nature during the Anthropocene.

The course will be presented in a partially flipped format. **Prior to class**, students will study short, narrated PowerPoint presentations, read assigned material from the textbook, and study short videos and podcasts. This material will be posted on Canvas at least one day before the scheduled class. Anticipate 1 to 1.5 hours of study time for each class period. This posted material is what will be covered in the regular class quizzes. **During class**, we will discuss and review the assigned class material, take a brief quiz on that material, expand on the material, and complete in-class activities. **Note:** because almost 50% your grade will come from quizzes and in-class activities that will happen during the class periods, to do well in this course you will need to attend the classes.

**Accommodations:** Given the nature of this course, regular attendance is required. We will record and post the in-class lectures, which you will be able to watch online, but missing the opportunity to work in groups during class will make the course harder and less productive.

However, given the rate at which the Delta variant of COVID 19 spreads and its increased virulence, we may be facing another crazy semester. Once again, if you are ill, please stay home and contact us as soon as possible to let us know if you are having problems related to the pandemic or other problems arise. We will do everything we can to help you succeed. Your success and safety are our priorities we will work with you to make that possible.

If you need to seek an ADA accommodation to request an exception to this attendance policy due to a disability, please contact the Center for Disability and Access (CDA). CDA will work with us to determine what, if any, ADA accommodations are reasonable and appropriate. In some circumstances we may be able to bypass the CDA and provide an appropriate accommodation. So talk to us if you have concerns about the CDA process.

**Instructor:** Dr. David Carrier, Email – [u0034308@umail.utah.edu](mailto:u0034308@umail.utah.edu)

**Office Hours:** Monday 3:00 – 4:00, Rm 123 Biology Building.

**Teaching Assistant:** Joseph Nagengast, Email - [u1319931@umail.utah.edu](mailto:u1319931@umail.utah.edu)

**Study Hall:** Thursday 9:30 – 12:30, tutoring foyer on first floor of Biology Building

## **Required Materials**

**Textbook:** *The Story of the Human Body: Evolution, Health, and Disease* by Daniel E. Lieberman. 2013. Vintage Books, New York. You can order this book online or read it as an e-book through Marriott Library. The Book Store will also have copies.

Assigned readings will come from this book and a few other sources during the semester. Plan on reading a chapter each week. A study guide will be provided for each chapter when it is assigned.

**Behavioral videos, podcasts and readings.** These will come from a variety of sources and also be assigned on a weekly basis. Study guides will be provided for most of these assignments.

### **Expected Learning Outcomes**

**By the end of this course, students should be able to:**

- Briefly describe the evolutionary history and defining characters of vertebrates, as well as the characters distinguish mammals from other vertebrates.
- Describe the evolutionary history of hominins and what characters distinguish hominins from other primates.
- Explain the significance of the major events in the evolution of *Homo*.
- Describe the physiological basis and health effects of the mismatch between the species we evolved to be and our modern lifestyle.
- Explain why our unusual musculoskeletal anatomy, intelligence, parental care, social systems, and culture have led to misconceptions about our anatomy, physiology, and behavior.
- Explain the evolution and anatomy of human speech.
- Understand sexual selection theory.
- Describe the impact of sexual selection on the human mating system.
- Explain the influence of our altricial young on the human mating system.
- Understand the role the endocrine system plays in stress, chronic stress, sexual differentiation of the nervous system, appetite.
- Understand the approach that the field of evolutionary psychology takes to understand human behavior.
- Explain the hypothesized influence of inclusive fitness, altruism, and reciprocal altruism on human behavior.
- Explain what the Anthropocene is and its significance.
- Describe the Earth's history of mass extinctions and the causes of the current mass extinction.
- Describe the progress that is being made in finding ways that humans can manage and coexist with the Earth's ecosystems for a sustainable future.

## Assignments and Grading

Course grade will be determined from your percentage score out of **1000** total points. Cumulative scores of 90%, 80%, 70% or 60% will guarantee grades of not less than A-, B-, C- and D, respectively. See assignment and grading table below.

<b>Assignment (Goal)</b>	<b>Total Points</b>	<b>Notes</b>
<p><b>In-Class Activities</b></p> <p>These exercises will focus on core concepts and will be completed during the class period by working in student groups.</p>	<p>27 exercises in total. We will drop the 3 lowest scores.</p> <p><b>24 x 10 points = 240 points</b></p>	<ul style="list-style-type: none"> <li>• Missed activities cannot be made up, and students will use dropped scores for missed assignments.</li> <li>• Topics of quizzes will be announced at least one class period before the date of each quiz.</li> <li>• Students will submit their answers on Canvas during the scheduled class period.</li> </ul>
<p><b>Class Quizzes</b></p> <p>These quizzes will cover the assigned narrated PowerPoint presentations and reading assignments. There will be a quiz during each class period and will be completed during the class period by working in student groups.</p>	<p>27 quizzes in total. We will drop the 3 lowest scores.</p> <p><b>12 x 20 points = 240 points</b></p>	<ul style="list-style-type: none"> <li>• Material covered in each quiz will be announced at least one class period before the date of each quiz.</li> <li>• Anticipate about one hour of study time prior to each class to prepare for the quiz.</li> <li>• Students will have the option of taking quizzes with their group or on their own.</li> </ul>
<p><b>Topic Explorations</b></p> <p>These short (one page) essays will provide opportunities to dive deeper into topics covered in the course and gain experience accessing and using primary literature in pursuit of understanding.</p>	<p><b>2 x 110 points = 220 points</b></p>	<ul style="list-style-type: none"> <li>• The goal of these essays is to explore specific topics covered in class by accessing and reading the primary literature.</li> <li>• Essays will be limited to one page and will follow a specific format and cite the relevant literature.</li> </ul>
<p><b>Exams</b></p>	<p><b>3 x 100 = 300 points</b></p>	<ul style="list-style-type: none"> <li>• Three 100-point exams.</li> <li>• The second and third exam will include some material (10 to 15 %) from the previous exam(s).</li> <li>• Instructor will hold a review session before each exam.</li> <li>• Students will have the option of taking exams with their group or on their own.</li> </ul>
	<p><b>1000 Total Points</b></p>	

## Course Policies

**Rescheduling In-Class Activities and Quizzes:** The three lowest grades for all assignments and quizzes will be dropped to accommodate low scores and unexpected absences. Therefore, rescheduling assignments and quizzes are not allowed. Rescheduling of exams is allowed only under extreme extenuating circumstances, such as serious illness or injury. Written documentation, such as a doctor's note, is required in each case. Rescheduled exams are also allowed for school-sponsored activities if a letter from the faculty mentor is provided.

**Regrading Exams:** Questions regarding grading other than arithmetic errors should be submitted *in writing* to the instructor *within one week* of the day on which the exams are returned. Please be as detailed and explicit as possible with regard to exactly what mistake was made in the grading of your exam.

**Attendance & Punctuality:** Your instructor expects all students to attend all class meetings. Please arrive on time and stay focused to end of class.

## University of Utah Policies

**Attendance and absence policies:** Given the nature of this course, regular attendance is required and adjustments cannot be granted to allow non-attendance. However, if you need to seek an ADA accommodation to request an exception to this attendance policy due to a disability, please contact the Center for Disability and Access (CDA). CDA will work with us to determine what, if any, ADA accommodations are reasonable and appropriate.

**Technology requirements:** To effectively participate in this class and complete the assignments, you will need to have an adequate desktop or laptop computer and access to a broadband internet connection. As a very rough guideline, a computer manufactured in the past five years should be fine. Laptops are available for checkout from the Marriot Library for the semester, depending on availability:  
<https://lib.utah.edu/coronavirus/checkout-equipment.php>.

You will also need to be able to smoothly navigate Canvas and Zoom. If you have concerns about any of these requirements, please contact the instructor as soon as possible.

**Drop, Withdrawal or Incomplete:** The University of Utah drop and withdrawal dates are on the class schedule. Also see <http://registrar.utah.edu/academic-calendars/index.php>. University policy allows assignment of a grade of incomplete (I) if 80% or more of the course work has been completed. We will consider assigning an "incomplete (I)" only under exceptional circumstances unrelated to academic performance, and only if a student is passing the course with a C or better when the "Incomplete" is requested.

**Disability accommodations:** The University of Utah seeks to provide equal access to its programs, services, and activities for people with disabilities. If you will need accommodations in this class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Olpin Union Building, (801) 581-5020. CDS will work with you and the instructor to make arrangements for accommodations. All written information in this course can be made available in an alternative format with prior notification to the Center for Disability Services.

\*If you would like to request academic accommodations due to a disability, please contact Disabled Student Services. If you have a letter from Disabled Student Services indicating you have a disability that requires academic accommodations, please present the letter to me so we can discuss the accommodations you might need for class.

**Discrimination and Harassment policies:** The University of Utah has zero tolerance for any Discriminatory or Harassing behavior. Title IX makes it clear that violence and harassment based on sex and gender (which includes sexual orientation and gender identity/expression) is a civil rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, color, religion, age, status as a person with a disability, veteran's status or genetic information. If you or someone you know has been harassed or assaulted, you are encouraged to report it to the Title IX Coordinator in the Office of Equal Opportunity and Affirmative Action, 135 Park Building, 801-581-8365, or the Office of the Dean of Students, 270 Union Building, 801-581-7066. To report to the police, contact the Department of Public Safety, 801-585-2677(COPS). For support and confidential consultation, contact Student Wellness 426 SSB, 801-581-7776.

**Academic Conduct:** In order to ensure that the highest standards of academic conduct are promoted and supported at the University, students must adhere to generally accepted standards of academic honesty. Acts of academic misconduct include cheating, plagiarizing, research misconduct, misrepresenting one's work, and inappropriately collaborating. Suspected cases of academic misconduct will be dealt with according to the procedures found in the Student Code, University Policy 6-400(V)(<http://regulations.utah.edu/academics/6-400.php>). Instances of academic misconduct will be recorded in a database that may be made available to other University of Utah Departments and Colleges.

**Wellness:** Personal concerns such as stress, anxiety, relationship difficulties, depression, cross-cultural differences, etc., can interfere with a student's ability to succeed and thrive at the University of Utah. For helpful resources contact the Center for Student Wellness; [www.wellness.utah.edu](http://www.wellness.utah.edu); 801-581-7776. Code of Student's Rights and Responsibility <http://www.regulations.utah.edu/academics/6-400.html>

*Note: This syllabus is meant to serve as an outline and guide for this course, and might be modified in response to the needs of the class. All changes will be announced in class and posted on Canvas under Announcements.*

**\*\*See class schedule on next page\*\***

## Tentative Course Schedule

Class #	Date	Topic	Readings and Quizzes
1	Mon, Aug 23	Introduction to natural selection	<i>The Story</i> – Introduction, pages 3 – 21.
2	Wed, Aug 25	Origin and evolution of vertebrates: what kind of animals are vertebrates?	
3	Mon, Aug 30	What kind of animals are mammals? Hominins - Standing up on two legs: evolution of the bipedal apes	<i>The Story</i> – Chapter 2, pages 25 – 47.
4	Wed, Sept 1	Evolution of humans: locomotor economy came before big brains	
	Mon, Sept 6	<b>Labor Day Holiday</b>	
5	Wed, Sept 8	Locomotor biomechanics and physiology of a bipedal hunter-gatherer	<i>The Story</i> – Chapter 3, pages 48 – 66.
6	Mon, Sept 13	The disastrous consequences of human homeostasis for <i>Homo technoweenie</i> : the conflict between the animal we evolved to be and our modern lifestyle	<i>The Story</i> – Chapters 4 and 5, pages 67 – 125.
7	Wed, Sept 15	The disastrous consequences of human homeostasis for <i>Homo technoweenie</i> : the conflict between the animal we evolved to be and our modern lifestyle	
8	Mon, Sept 20	Anatomy of human speech: an ape with consonants.	<i>The Story</i> – Chapter 5, pages 94 – 118 and 125.
9	Wed, Sept 22	Speech, language, grammar, and the Great Leap Forward	
10	Mon, Sept 27	The invention of agriculture: oops!	<i>The Story</i> – Chapter 6.
11	Wed, Sept 29	<b>First Mid-Term Exam</b>	
12	Mon, Oct 4	Introduction to sexual selection theory: a theory central to human life history and behavior, but a theory with only two genders.	<i>The Story</i> – Chapter 7.
13	Wed, Oct 6	Human mating system: a system to grow a big brain.	
	Mon, Oct 11	<b>Fall Break</b>	
	Wed, Oct 13	<b>Fall Break</b>	
14	Mon, Oct 18	Introduction to endocrinology.	<i>The Story</i> – Chapter 8.
15	Wed, Oct 20	The chronic stress of a social species.	
16	Mon, Oct 25	The chronic stress of a social species.	<i>The Story</i> – Chapter 9.
17	Wed, Oct 27	Sexual differentiation of the brain: an explanation for a continuum of genders.	
18	Mon, Nov 1	Endocrine disruption	<i>The Story</i> – Chapter 10.
19	Wed, Nov 3	Sexual differentiation of the body: anatomical specialization for aggression?	<b>(First one-page exploration due)</b>

20	Mon, Nov 8	Emotions. We have them, so do sharks, toads, crocodiles, and dogs.	<i>The Story</i> – Chapter 11. pages 294 – 317.
21	Wed, Nov 10	<b>Second Mid-Term Exam</b>	
22	Wed, Nov 15	Introduction to inclusive fitness: altruism and reciprocal altruism.	
23	Mon, Nov 17	The flip side of altruism: ethnocentrism, xenophobia, and groupishness.	
24	Mon, Nov 22	Structural violence: is it time to “defund” the human brain?	<i>The Story</i> – Chapter 12. pages 318 – 346.
25	Wed, Nov 24	Rational behavior that isn’t all that rational: why are we so willing to do demonstrably dumb things?	
26	Mon, Nov 29	Humans as a physical force: the Anthropocene and climate change.	<i>The Story</i> – Chapter 13, pages 347 – 367.
27	Wed, Dec 1	The sixth mass extinction.	
28	Mon, Dec 6	Human ecosystem relationships.	
29	Wed, Dec 8	Our path forward.	<b>(Second one-page exploration due)</b>
	<b>Fri, Dec 13</b>	<b>Final Exam - 1:00 to 3:00</b>	