



**SYLLABUS for
Biology 1030 Human Biology**

Fall , Semester 2020

Monday, Wednesday, and Friday 12:55 – 1:45, Zoom meetings

For Fall 2020, Biology 1030 is being offered as an Instructional Video Conferencing (IVC) class. Class sessions will be held at the scheduled times via Zoom. Quizzes and exams will also be handled online. Participation in the course will depend on having access to a computer and a broadband internet connection, as well as being able to use Canvas, Zoom and other online resources effectively. Please contact the instructor, Dr. Carrier, as soon as possible if you have concerns about these requirements. Further details are provided in the sections below.

Course Description

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 Zoom classes, 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 Zoom class periods, to do well in this course you will need to attend the Zoom classes.

Instructor: Dr. David Carrier. Email – carrier@biology.utah.edu

Instructor Office Hours: Wednesday 2:00 – 3:00.

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 the human core.
- Explain the evolution and anatomy of human speech.
- 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 approach that the field of evolutionary psychology takes to understand 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 **900** 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.

Assignment (Goal) Information	Total Points (calculation)	Notes
<p>In-Class Activities</p> <p>These exercises will focus on core concepts and will be completed during the class period by working in student Zoom groups.</p>	<p>18 exercises in total. We will drop the 3 lowest scores.</p> <p>15 x 10 points = 150 points</p>	<ul style="list-style-type: none"> • Missed activities cannot be made up, and students will use dropped scores for missed assignments. • Topics of quizzes will be announced at least one class period before the date of each quiz. • Students will submit their answers on Canvas during the scheduled class period.
<p>Class Quizzes</p> <p>These quizzes will cover the assigned narrated PowerPoint presentations and reading assignments. There will be a quiz during each class period.</p>	<p>39 quizzes in total. We will drop the 3 lowest scores.</p> <p>36 x 10 points = 360 points</p>	<ul style="list-style-type: none"> • Material covered in each quiz will be announced at least one class period before the date of each quiz. • Anticipate about one hour of study time prior to each class to prepare for the quiz. • Students will have the option of taking quizzes with their group or on their own.
<p>Topic Explorations</p> <p>These short 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>2 x 120 points = 240 points</p>	<ul style="list-style-type: none"> • The goal of these essays is to explore specific topics covered in class by accessing and reading the primary literature. • Essays will be limited to one page and will follow a specific format and cite the relevant literature.
<p>Exams</p> <p>(Summative assessment)</p>	<p>3 x 100 = 300 points</p>	<ul style="list-style-type: none"> • Three 100-point exams. • The second and third exam will include some material (10 to 15 %) from previous exam/s. • Instructor will hold a review session before each exam. • Students will have the option of taking exams with their group or on their own.
	<p>1050 Total Points</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 is 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.

COVID safety information

Current information about the university's response to COVID-19 can be found at:

<https://coronavirus.utah.edu/>

and:

<https://returntocampus.utah.edu/>

In order to help monitor the spread of COVID-19 and respond appropriately, the university requests that faculty students and staff complete a reporting form if they have received a positive COVID test result, or if they are waiting for a test result: [Test Report Form](#) (uNID login required). The university will not release personal information collected from this form.

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; 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 24	Introduction to natural selection: basic principles	<i>The Story</i> – Introduction, pages 3 – 21.
2	Wed, Aug 26	The origin of animals	
3	Fri, Aug 28	Origin and evolution of vertebrates: what kind of animals are vertebrates?	
4	Mon, Aug 31	What kind of animals are mammals?	<i>The Story</i> – Chapter 2, pages 25 – 47.
5	Wed, Sept 2	Standing up on two legs: evolution of the bipedal apes	
6	Fri, Sept 4	Evolution of humans: locomotor economy came before big brains	Quiz 1
	Mon, Sept 7	Labor Day Holiday	
7	Wed, Sept 9	Locomotor biomechanics of a bipedal hunter-gatherer	<i>The Story</i> – Chapter 3, pages 48 – 66.
8	Fri, Sept 11	Exercise physiology of a bipedal hunter-gatherer	
9	Mon, Sept 14	Evolution of the human musculoskeletal core	<i>The Story</i> – Chapters 4 and 5, pages 67 – 125.
10	Wed, Sept 16	Osteoporosis and the musculoskeletal core: an indication of a conflict	
11	Fri, Sept 18	The disastrous consequences of human homeostasis for <i>Homo technoweenie</i> : the conflict between the animal we evolved to be and our modern lifestyle	Quiz 2
12	Mon, Sept 21	The disastrous consequences of human homeostasis for <i>Homo technoweenie</i> .	<i>The Story</i> – Chapter 6, pages 126 – 153.
13	Wed, Sept 23	The disastrous consequences of human homeostasis for <i>Homo technoweenie</i> .	
14	Fri, Sept 25	First Mid-Term Exam	
15	Mon, Sept 28	The disastrous consequences of human homeostasis for <i>Homo technoweenie</i> .	<i>The Story</i> – Chapter 7, pages 157 – 179.

16	Wed, Sept 30	Anatomy of human speech	(First one-page exploration due)
17	Fri, Oct 2	Speech, language, grammar	Quiz 3
	Mon, Oct 5	Speech, language, grammar, and the Great Leap Forward	
18	Wed, Oct 7	Introduction to sexual selection theory	<i>The Story</i> – Chapter 8, pages 181 – 208.
19	Fri, Oct 9	Introduction to Endocrinology	
20	Mon Oct 12	Sexual differentiation of the brain	<i>The Story</i> – Chapter 9, pages 209 – 247.
21	Wed, Oct 14	Sexual differentiation of the brain and gender identification	
22	Fri, Oct 16	Human mating system – a system to grow a big brain	Quiz 4
23	Mon, Oct 19	Human mating system – a system to grow a big brain	<i>The Story</i> – Chapter 10, pages 251 – 292.
24	Wed, Oct 21	Emotions. We have them, so do sharks, toads, crocodiles, and dogs.	
25	Fri, Oct 23	Introduction to inclusive fitness: altruism and reciprocal altruism	
26	Mon, Oct 26	The flip side of altruism: ethnocentrism and xenophobia	
27	Wed, Oct 28	Structural violence: is it time to “defund” the human brain?	
28	Fri, Oct 30	Anatomical specialization for aggression.	
29	Mon, Nov 2	Anatomical specialization for aggression.	<i>The Story</i> – Chapter 11, pages 294 – 317.
30	Wed, Nov 4	Invention of agriculture, oops!	
31	Fri, Nov 6	Second Mid-Term Exam	
32	Mon, Nov 9	Rational behavior that isn’t all that rational.	<i>The Story</i> – Chapter 12, pages 318 – 346.
33	Wed, Nov 11	The chronic stress of a social species.	(Second one-page exploration due)
34	Fri, Nov 13	The chronic stress of a social species.	Quiz 5
35	Mon, Nov 16	The chronic stress of a social species.	<i>The Story</i> – Chapter 13, pages 347 – 367.

36	Wed, Nov 18	Humans as a physical force: the Anthropocene.	
37	Fri, Nov 21	Climate change and how to explain it to someone who believes it is a malicious deception.	
38	Mon, Nov 23	The sixth mass extinction.	
39	Wed, Nov 25	Human ecosystem relationships.	Quiz 6
	Fri, Nov 27	Thanksgiving Holiday	
40	Mon, Nov 30	Human ecosystem relationships.	
41	Wed, Dec 2	Human ecosystem relationships.	(Third one-page exploration due)
	Fri, Dec 11	1:00 to 3:00 Final Exam	