



## **BIOL1010 - BIOLOGY IN THE 21ST CENTURY**

Spring Semester 2021

MON, WED & FRI, 3:00 – 3:50 PM

**Instructor:** Hye-Joo Kwon, Ph.D.  
**Email:** [hyejoo.kwon@utah.edu](mailto:hyejoo.kwon@utah.edu)  
**Phone Number:** 032-626-6238  
**Office Hours:** 01:00 - 2:45 (MON – FRI)  
**Office Location:** U827

### **Textbook & Materials**

- *Concepts in Biology*  
([https://bio.libretexts.org/Bookshelves/Introductory\\_and\\_General\\_Biology/Book%3A\\_Concepts\\_in\\_Biology\\_\(OpenStax\)](https://bio.libretexts.org/Bookshelves/Introductory_and_General_Biology/Book%3A_Concepts_in_Biology_(OpenStax)))
- Other required materials for the course, including reading materials and videos will be posted on Canvas.
- *Biology: science for life* by Belk & Maier, 6th Edition, 2019, Pearson.

### **Course Description**

Understanding science is central to informing policies, driving innovations, and evaluating ethical considerations relevant to life on Earth. This course examines the interplay between science and society. The full spectrum of the human experience and health, to race, evolution, and environmental change will be explored. Case studies, short readings, and videos, relevant to life in the 21st century, will be referenced throughout the course. 3 credits.

### **Course Outcomes**

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

- understand fundamental principles of biology.
- apply the scientific method to questions related with biology.
- use the knowledge as a tool to analyze ethical and moral issues involving biology.
- make decisions that are individually, socially, and ecologically responsible for life.

### **Teaching and Learning Methods**

This course uses lecture, discussions, experiential learning and problem-based learning to achieve learning outcomes.

## University Policies

- 1. *The Americans with Disabilities Act.*** The University of Utah Asia Campus 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 UAC Office of the Dean of Students - [randy.mccrillis@utah.edu](mailto:randy.mccrillis@utah.edu). The UAC Office of the Dean of Students 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 UAC Office of the Dean of Students.
- 2. *Sexual Misconduct.*** 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 UAC Office of the Dean of Students - [randy.mccrillis@utah.edu](mailto:randy.mccrillis@utah.edu). For support and confidential consultation, contact the UAC Mental Health Counseling, 3052 Multi-complex Building, 032-626-6142
- 3. *Student Code of Conduct.*** All students are expected to maintain professional behavior in the classroom setting as outlined in the Code of Student Rights and Responsibilities, Policy 6-400 of the University Regulations Library (<http://www.regulations.utah.edu/academics/6-400.html>).
- 4. *Wellness Statement.*** 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 Asia Campus. For helpful resources, contact the UAC Mental Health Counseling Center; <https://asiacampus.utah.edu/mental-health-counseling-center/>; 032-626-6142. You can make an appointment using this link: <https://appointmentwithjan.as.me/schedule.php>.
- 5. *Language Policy.*** The University of Utah Asia campus is committed to providing and fostering an environment that is safe and free from prohibited discrimination. The following language policy applies to all academic and administrative units of the University and to all members of the University community, including faculty, staff, and students. English is recognized as the official language of instruction, assessment, and curriculum. In addition, English is the official language for all administrative and business related matters of the University.

6. **Official Excused Absences.** In order for a student to receive an official excused absence, the student must complete a request form in the office of the Assistant Dean of Students ([kevin.darco@utah.edu](mailto:kevin.darco@utah.edu)) and provide any accompanying documentation with the request. If the request is approved, the Assistant Dean of Students will email all appropriate faculty with this notification. If a student will be absent from an exam, they must email the Assistant Dean of Students at [kevin.darco@utah.edu](mailto:kevin.darco@utah.edu) prior to the exam.
7. **COVID-19 Related Absences.** If you have COVID-19 symptoms, including fever or respiratory symptoms such as cough, phlegm, sore throat, and nasal congestion, you should notify your instructor immediately, call the KCDC for testing guidance, and stay home based on the KCDC's directive. You can return to class if you are clear from COVID-19 symptoms. In order to be excused from your courses, you will need an official medical certification.
8. **Self-quarantine.** The University of Utah Asia Campus expects regular attendance at all class meetings. Given the current situation with COVID-19, we have created the following guidelines.
  - If a student has completed less than 50% of the course and is required to self-quarantine, we suggest that the student withdraw from the course. In this situation, all tuition will be refunded with appropriate medical documentation
  - If a student has completed 50-75% of the course and is required to self-quarantine, the Dean of Students Office will work with the faculty and student to determine the best scenario. If the decision is to withdraw from a course, all tuition will be refunded with appropriate medical documentation.
  - If a student has completed over 75% of the course and is required to self-quarantine, the student and faculty will work together to ensure that the student is able to complete the course. If the student is unable to finish all coursework during the course, a student may receive the mark "I" (incomplete) and work to complete all remaining coursework in consultation with the instructor.

## Course Policies

Attendance & Punctuality: The University expects regular attendance at all class meetings. Instructors must communicate any particular attendance requirements of the course to students in writing on or before the first class meeting. Students are responsible for acquainting themselves with and satisfying the entire range of academic objectives and requirements as defined by the instructor.

### Participation:

Students are expected to be an active participant in class. Students should read the reading materials before or after the lecture, contribute to discussions and be willing to think.

### Electronic Devices in Class:

Mobile phones must remain in silent mode.

Canvas:

Students are responsible for checking the Canvas course web site which contains announcements, assignments and/or any changes in the syllabus.

Orange Level:

If the University of Utah Asia Campus commences Level Orange, this course will be operating in a hybrid method. For this course, the hybrid option entails OPTION B, which will have lecture days and seminar days each week. During lecture days, students will participate an interactive video conference format or content will be delivered all online, and during seminar days, students will participate in-person.

Zoom Session:

If this course must host Zoom sessions, the University of Utah Asia Campus requires that all students turn on their cameras during the entire course and post their full name in English. We ask that students try to locate a quiet space that will allow for ample social distancing and that students not wear a mask if possible. If a student has financial difficulty obtaining the appropriate equipment for online courses, the UAC can help provide resources. It is recommended that Zoom sessions be conducted synchronously. Faculty are not required to record their zoom sessions; this is an individual faculty decision.

**Grading Policy**

The grade will be determined by the following:

Learning activities (50 %) + Exams (50 %) = Total (100 %)

- Learning activities include in-class participation and assignments.
- The exams will consist of a mix of multiple choice, fill in the blank, short answer, and essay/analysis questions.

*Grading Scale*

	<u>Score</u>
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:	63-66
D-:	60-62
E:	0-59

## Course Schedule

*Note: This syllabus is meant to serve as an outline and guide for our course. Please note that I may modify it with reasonable notice to you. I may also modify the Course Schedule to accommodate the needs of our class. Any changes will be announced in class and posted on Canvas under Announcements.*

Week	Date	Topic	Reading
1	22-Feb Mo	Process of Science	1: Introduction to Biology
	24-Feb We	Themes of Biology	
	26-Feb Fr	Virus, Coronavirus, & SARS-CoV-2	
2	1-Mar Mo	<i>Independence Movement Day</i>	
	3-Mar We	Molecules of Life	2: Chemistry of Life
	5-Mar Fr	Food vs. Supplement	
3	8-Mar Mo	World of the Cell	3: Cell Structure and Function
	10-Mar We	How Cells Obtain Energy	4: How Cells Obtain Energy
	12-Mar Fr	Body Weight and Health	
4	15-Mar Mo	Photosynthesis	5: Photosynthesis
	17-Mar We	Life in the Greenhouse	20.2: Biogeochemical Cycles
	19-Mar Fr	Climate Change	What is climate change? (BBC)
5	22-Mar Mo	Cell Cycle	6: Reproduction at the Cellular Level
	24-Mar We	Cancer	
	26-Mar Fr	The Cellular Basis of Inheritance	
6	29-Mar Mo	Reproduction & Fertility	18: Animal Reproduction and Development
	31-Mar We	<i>Spring Recess</i>	
	2-Apr Fr		
7	5-Apr Mo	<i>MIDTERM EXAM1</i>	
	7-Apr We	Patterns of Inheritance	8: Patterns of Inheritance
	9-Apr Fr	Extensions of Mendelian Genetics	
12-Apr Mo	Complex Genetic Traits		
8	14-Apr We	Genetic Testing	Genetic Disorders (Learn.Genetics.Utah)
	16-Apr Fr	"DNA"	9: Molecular Biology
	19-Apr Mo	Gene Expression	
21-Apr We	How Genes Are Regulated		
9	23-Apr Fr	Genetically Modified Organisms	10: Biotechnology
	26-Apr Mo	Biotechnology in Medicine	
	28-Apr We	Genomics and Proteomics	
10	30-Apr Fr	Review	
	3-May Mo	<i>Reading Day</i>	
	5-May We		
11	7-May Fr	<i>MIDTERM EXAM2</i>	
	10-May Mo	An Evolving Enemy	11: Evolution and Its Processes
	12-May We	Understanding Race	
14-May Fr	Misconceptions about Evolution		
12	17-May Mo	Biological Classification	12: Diversity of Life
	19-May We	<i>Buddha's Birthday</i>	
	21-May Fr	Diversity of Life	13: Diversity of Microbes, Fungi, and Protists
13	24-May Mo	The Greatest Species on Earth	14: Diversity of Plants; 15: Diversity of Animals
	26-May We	The Sixth Extinction	21: Conservation and Biodiversity
	28-May Fr	Conserving Biodiversity	20.1: Energy Flow through Ecosystems
14	31-May Mo	Is the Human Population Too Large?	19: Population and Community Ecology
	2-Jun We	Vaccination: Protection and Prevention or Peril	17: The Immune System and Disease
	4-Jun Fr	COVID-19 Vaccines & Therapeutics	
15		<i>FINAL EXAM</i>	