Image from the Genetics Literacy Project via Sydney Morning Herald.

INTRO BIO

BIOL1103

285 SLC

MWF 1:50

Spring 2021

COURSE DETAILS

Required TopHat Electronic Response System
http://www.tophat.com

Required textbook: Open Stax Concepts in Biology free on TopHat

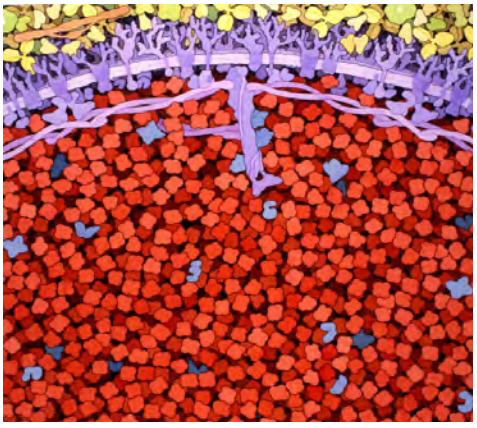

Image from David Goodsell's "The Machinery of Life"

COURSE DESCRIPTION AND OBJECTIVES

In this course, we will address issues regarding scientific claims about health, the environment, and society to help you develop skills important for becoming a critical consumer of science information in the media. This course fulfills UGA's Gen Ed Core Curriculum science requirement.

Instructors

DR. PEGGY BRICKMAN
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3510 Plant Sciences

DR. ZACHARY LEWIS
(he/him/his)
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828 Biosciences

Office Hours: MWF 12:30-1:30 pm on Zoom link on eLC

Mikiesha Hill: 403A Biosciences 542-1684 for general information about enrollment, grade problems, and exam scheduling.

Office hours are an opportunity for you to connect with us and ask any clarifying content, find support, and explore what you may want to do after your graduate. Come and visit us any time at our class zoom link posted on eLC.

"The capacity to blunder slightly is the real marvel of DNA. Without this special attribute, we would still be anaerobic bacteria and there would be no music." – Lewis Thomas

WHAT'S IN THIS SYLLABUS?

Chao Hu, one of the five largest freshwater lakes in China, is now is one of the most polluted due to heavy use of fertilizer. Image from watershedplus.tumblr.com.

By the end of this course, you will be able to…

◊ Apply principles of biology to real world situations like deciding to get genetic testing or a vaccination.

◊ Identify and evaluate valid sources of scientific information.

◊ Analyze and apply scientific information to make everyday decisions.

◊ Explain how scientists test claims and compose scientific arguments.

◊ Communicate scientific ideas and build arguments in writing.

COURSE REQUIREMENTS

Content

Your textbook sections, pre-class homework, and in-class presentations with polling questions will be delivered via Top Hat Pro. To access Top Hat, you will need to register and pay a subscription. For instructions on how to create a Top Hat account and enroll in our course, please refer to the invitation sent to your UGA email address or consult Top Hat's Getting Started Guide (https://bit.ly/31TGMlw). If you already have a Top Hat account, go to [https://app.tophat.com/e/693517/ for the AM course and https://app.tophat.com/e/341724 for the PM course] to be taken directly to our course. If you are new to Top Hat, follow the link in the email invitation you received or…

- Go to https://app.tophat.com/register/student
- Click "Search by school" and input the name of our school
- Search for our course with the following join code: [693517 11:30 AM section or 341724 1: 05 PM section]
  The paid subscription will be listed at checkout when you enrol in our Top Hat Pro course.

Should you require assistance with Top Hat at any time please contact their Support Team directly by email (support@tophat.com), the in-app support button, or by calling 1-888-663-5491. Specific user information may be required by their technical support team when troubleshooting issues.

Class Attendance and Participation Policy

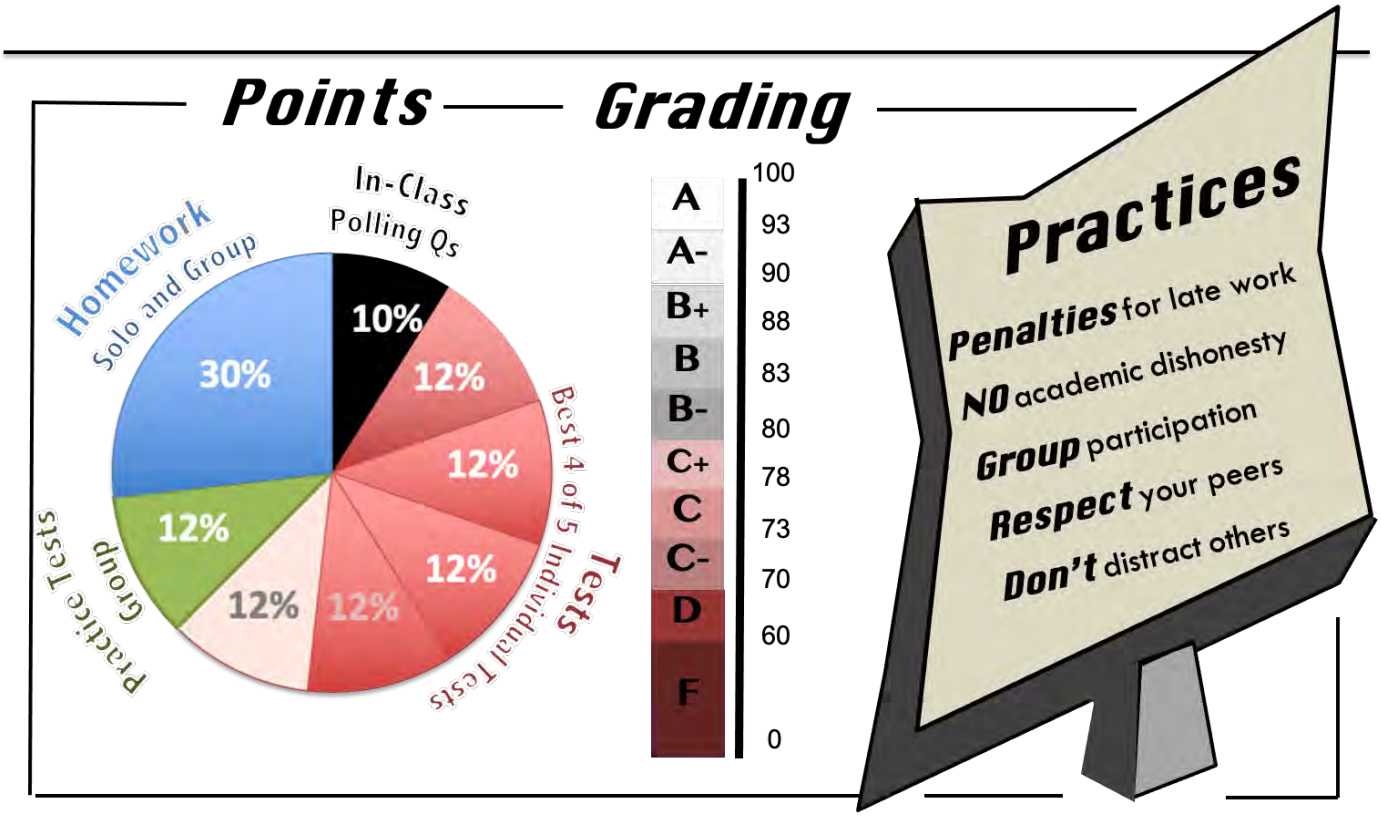
Due to COVID-19 restrictions, we can only allow 1/3 of students to attend each session. We have decided that students with last names A-G may attend Mondays, H-O may attend Wednesdays, and P-Z may attend Fridays. You can always attend virtually via Top Hat, and even those in class will need to login to Top Hat during class to be able to participate through synchronous polling questions that will be worth 10% of your final grade. If you respond to 80% of all the in-class questions posed during the semester (no penalty for incorrect answers), you will receive all the attendance points.

Group Assignments

Each module includes homework assignments, some completed solo and others with a group. I will assign you to one of 70 groups on Top Hat. You will be able to text with your group using the Top Hat app even if some of you are not in class to help answer questions and work through problems. You will also be able to take group tests together during the class period directly before our end-of-unit tests.

The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.

GRADING SCALE AND TEST INFORMATION



Unit Topics:	Alcohol Metabolism	Gene Expression	Genetic Testing	Diseases & Immunity	Global Cycling
Instructor	Brickman	Brickman	Lewis	Brickman	Brickman
Unit Test Dates:	FEB 3	FEB 22	MAR 17	APR 7	APR 28

Assessment Format

Tests will be multiple-choice, matching, and ordering with a focus on application and analysis. There will be a total of 5 tests, but only 4 scores will be counted in your final grade. If you have to miss a test or choose to miss a test, you will not be penalized. Consequently, there are no make-up tests. There will be practice tests posted on Top Hat for you to test your understanding that is available during the last class session before the test. For each of the practice tests given during the regular semester, you will be allowed to take the test with your group. If you did not understand a question, this is your opportunity to have it clarified and corrected for you by someone in your group. This instant feedback will not only improve your grade, but it will help you learn the material better for your own test performance.

how to benefit from teamwork	bickering	cooperating	collaborating
You will be working with a group of 4 people all semester during class assignments and group tests. Why? Because the act of exchanging reasoning and explaining your own understanding helps you learn better and makes the class more fun. To work effectively, however, every member of your group needs to contribute. If a member misses a test or fails to contribute on an assignment, that person cannot be awarded points but will have to make up the work individually. You will get the opportunity to (anonymously) let us know that you are having a problem with your group through an online survey after the first two units.	Ineffective groups don't see eye to eye: one member dominates while another member coasts on other's work. It is critical that every member of the group comes prepared and works equally. If members fail to attend meetings, don't complete their portion of the group task, or submit unacceptable work you have the right to "fire" that member. Firing involves a two step process: (1) Email warning, negotiation (2) Removal from the group if not rectified. The member now has to complete all assignments individually unless adopted by a new group. Let problematic group members know their faults on acknowledgements sections.	In these groups, everyone works together. They listen to eachother and don't override everyone else to get their way. However, interactions are done to be efficient, with each member separately completing their share of the work. These groups assign members different tasks but rarely give constructive feedback. Instead they just merge and submit the final assignment without trying to improve it first. It feels to these group members that the others just don't really care.	These group members actively engage in discussion, negotiation, and consensus building. During group work in class they discuss the different answers and the reasoning for their answer, and they work to make sure that everyone in the group contributes. One example might be a group that studies for a test by assigning each member a different section of material for that test, learning that material really, really well, and taking turns teaching their section to the rest of the group during a study session.

THE FINE PRINT

Academic Honesty

As a University of Georgia student, you have agreed to abide by the University's academic honesty policy, "A Culture of Honesty," and the Student Honor Code. All academic work must meet the standards described in "A Culture of Honesty" found at: https://ovpi.uga.edu/academic-honesty/academic-honesty-policy. Lack of knowledge of the academic honesty policy is not a reasonable explanation for a violation. Questions related to course assignments and the academic honesty policy should be directed to the instructor.

Commitment to Intersectionality

We would like to acknowledge that we are all individuals with multiple sociocultural identities that intersect and shape our worldview through the lens of privilege and oppression. Our commitment to you as your instructors is to minimize systemic forces of oppression within the classroom such as ableism, classism, racism, sexism, trans oppression, and heterosexism in efforts to create a safe(r) learning environment for all of us. We ask that you also join us in this commitment to foster respect for one another, enhance solidarity, and build community.

Online Classroom Etiquette

For optimal course performance, please refrain from instant messaging, e-mailing, surfing the Internet, playing games, doing homework, etc. during class time. We will be using Top Hat for presentations and assigned in-class activities that require laptop use. Make it your goal to get the most out of this shared time.

ACCOMMODATIONS

We are committed to making sure our course and materials are affirming of students living with disabilities. If you plan to request accommodations for a disability, please register with the Disability Resource Center. They can be reached by visiting Clark Howell Hall, calling 706-542-8719 (voice) or 706-542-8778 (TTY), or by visiting http://drc.uga.edu. We am here to support you, so please don't hesitate to reach out, and we can help you with any specific challenges you are experiencing with our course.

Coronavirus Information for Students

Face Coverings: As a reminder, the University of Georgia—along with all University System of Georgia (USG) institutions—requires all faculty, staff, students, and visitors to wear an appropriate face covering while inside campus facilities/buildings where six feet social distancing may not always be possible. Anyone not using a face covering when required will be asked to wear one or must leave the area. Reasonable accommodations may be made for those who are unable to wear a face covering for documented health reasons. Students seeking an accommodation related to face coverings should contact Disability Services at https://drc.uga.edu/.

DawgCheck: Please perform a quick symptom check each weekday on DawgCheck—on the UGA app or website—whether you feel sick or not. It will help health providers monitor the health situation on campus: https://dawgcheck.uga.edu/

What do I do if I have symptoms?

Students showing symptoms should self-isolate and schedule an appointment with the University Health Center by calling 706-542-1162 (Monday-Friday, 8 a.m.-5 p.m.). Please DO NOT walk-in. For emergencies and after-hours care, see https://www.uhs.uga.edu/info/emergencies.

What do I do if I test positive?

Any student with a positive COVID-19 test is **required** to report the test in DawgCheck and should self-isolate immediately. Students should not attend classes in-person until the isolation period is completed. Once you report the positive test through DawgCheck, UGA Student Care and Outreach will follow up with you.

What do I do if I am notified that I have been exposed?

Effective Jan. 4, 2021, students who learn they have been directly exposed to COVID-19 but are not showing symptoms should self-quarantine for **10 days** (consistent with updated Department of Public Health (DPH) and Centers for Disease Control and Prevention (CDC) guidelines). Those quarantining for 10 days must have been symptom-free throughout the monitoring period. Please correspond with your instructor via email, with a cc: to Student Care & Outreach at sco@uga.edu, to coordinate continuing your coursework while self-quarantined.

We strongly encourage students to voluntarily take a COVID-19 test within 48 hours of the end of the 10-day quarantine period (test to be administered between days 8 and 10). Students may obtain these tests at Legion Field (https://clia.vetview.vet.uga.edu/) or at the University Health Center by calling 706-542-1162 (Monday-Friday, 8 a.m.-5 p.m.). Please DO NOT walk-in the University Health Center without an appointment. For emergencies and after-hours care, see https://www.uhs.uga.edu/info/emergencies

If the test is negative, the individual may return to campus, but MUST continue to closely monitor for any new COVID-19 symptoms through 14 days. DawgCheck is the best method for monitoring these symptoms. If new symptoms occur, the individual must not come to campus and must seek further testing/evaluation.

If the test is positive at the end of the 10-day period, the individual must begin a 10-day isolation period from the date of the test.

How do I participate in surveillance testing if I have NO symptoms?

We strongly encourage you to take advantage of the expanded surveillance testing that is being offered from **January 4 – 22: up to 1,500 free tests per day at Legion Field and pop-up locations.** Testing at Legion Field can be scheduled at https://clia.vetview.vet.uga.edu/. Walk-up appointments can usually be accommodated at Legion Field, and pop-up saliva testing does not require pre-registration. For planning purposes, precise sites and schedules for the pop-up clinics are published on the UHC's website and its social media as they are secured: https://www.uhs.uga.edu/healthtopics/covid-surveillance-testing.

Tentative Course Schedule: (*subject to change*)

LESSON SCHEDULE ❖ BIOL 1103 ❖ Spring 2021

UNIT	LESSON	DATE		TOPIC
I Alcohol Metabolism	**1.1**	W	1/13	Introduction and Nutrition Labels
	1.2	F	1/15	Food Molecules (Carbohydrates & Lipids)
	--	M	1/18	**Martin Luther King Jr. Holiday – No Class**
	1.3	W	1/20	Food Molecules (Lipids & Proteins)
	1.4	F	1/22	Metabolic Pathways and Enzymes
	1.5	M	1/25	Genetic Variation in Alcohol Metabolism I
	1.6	W	1/27	Genetic Variation in Alcohol Metabolism II
	1.7	F	1/29	Variations in Enzymes
	1.8	M	2/1	Alcohol Metabolism Practice Test
	EXAM 1	W	2/3	**EXAM 1**
II Gene Expression	**2.1**	F	2/5	Epigenetics & Sources
	2.2	M	2/8	Genomes & Epigenomes
	2.3	W	2/10	Regulating Gene Expression
	2.4	F	2/12	Food Deserts, Stress, & the Epigenome
	2.5	M	2/15	Cancer and Microarrays
	--	W	2/17	**Instructional Break No Class**
		F	2/19	Gene Expression Practice Test
	EXAM 2	M	2/22	**EXAM 2**
III Genetic Testing	**3.1**	W	2/24	Introduction to Genetic Testing
	3.1	F	2/26	Types of Genetic Variation
	3.2	M	3/1	Patterns of Inheritance I– Patterns & Probabilities
	3.3	W	3/3	Patterns of Inheritance II – Identifying Patterns in Families
	3.4	F	3/5	Methods of Genetic Testing I
	3.5	M	3/8	Methods of Genetic Testing II -
	3.6	W	3/10	Applying SNP-chip Genetics to Real Life Scenarios
		F	3/12	**Instructional Break No Class**
	3.7	M	3/15	Genetic Testing Practice Test
	EXAM 3	W	3/17	**EXAM 3**
IV Diseases & Immunity	**4.1**	F	3/19	Introduction to Viruses & COVID-19
	4.2	M	3/22	Tracking Viral Evolution **Withdrawal Deadline 3/23**
	4.3	W	3/24	How the Immune System Responds to Disease
	4.4	F	3/26	Herd Immunity and Vaccination
	4.5	M	3/29	Society and Vaccines
	4.6	W	3/31	Microbiomes
	4.7	F	4/2	Allergy and Making Hypoallergenic Foods
	4.8	M	4/5	Disease & Immunity Practice Test
	EXAM 4	W	4/7	**EXAM 4**
V Global Cycling	**5.1**	F	4/9	Biochemical Cycles & Climate Change
	5.2	M	4/12	Biofuels
	5.3	W	4/14	Ecosystems & Aquatic Biomes
	5.4	F	4/16	Nitrogen Cycles & Dead Zones
	5.5	M	4/19	Coral Reef Bleaching
	5.6	W	4/21	Ocean Acidification
	5.7	F	4/23	Plastics
	5.8	M	4/26	Ecosystems Practice Test
	EXAM 5	W	4/28	**EXAM 5**
	5.9	F	4/30	Carbon Footprints