

BIOL 115L-01 – CELLS & THE EVOLUTION OF LIFE (LAB)

Spring 2021

INSTRUCTOR INFORMATION

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Office: Life Sciences South 260

208-885-4095

Tentative Office Hours: Tues/Thurs, 9:00-10:00am (scheduled by VandalStar or walk-in); or by appointment (requested via email). Appointments may be either in-person or via Zoom.

I will communicate with you by university-sponsored email. Please be sure to check your email account often, and ensure that my email address is not blocked.

If at any point you are struggling with the material or have life issues that impact your academic work, you need to contact me immediately so we can work together to come up with potential solutions as soon as possible.

CLASS FORMAT:

The 115L labs are all on-line this semester. There are no required in-person meeting times. Material will be assigned using the course BbLearn site and McGraw-Hill Connect's virtual labs. A teaching assistant will be available at posted times to help with the course, in addition to the instructor's office hours.

PREREQUISITE:

You must have passed or be enrolled in Biol 115 (the lecture) to enroll in Biol 115L (the lab).

COURSE DESCRIPTION:

In this course, you will be introduced to foundations of cellular-level biology and laboratory techniques used in related research. You will be using basic biology laboratory techniques across the topics of the chemistry of life, cell structure, metabolic pathways, meiosis and mitosis, and inheritance.

COURSE OBJECTIVES:

The over-arching goal of Biol 115 (lecture and laboratory) is to prepare students for future coursework in biology-related sciences. Preparedness encompasses 3 general areas: 1) foundational knowledge & understanding of biology, 2) skill as a scientist, and 3) skill as a student. *By the end of the semester, a successful student will have:*

- a foundational vocabulary and understanding of the cellular processes vital to life on Earth, including the following core areas
 - Relevance of chemistry to biology
 - Large biological molecules (structure, function, & importance)
 - Cellular structure and function (membranes, metabolism, & division)
 - Inheritance of traits (Mendelian genetics & meiosis)
 - Protein synthesis (process, importance, & mutation effects)
- increased awareness of science as a process rather than simply a collection of facts to be memorized
- increased confidence in generating scientific hypotheses and interpreting scientific data
- increased ability to communicate scientific information

LEARNING OUTCOMES: *In accordance with the University's Learning Outcomes -*

Learn & Integrate: Students will synthesize previous biological knowledge with knowledge gained from laboratory exercises to attain an understanding of the cell and heredity.

Think & Create: Students will synthesize and apply their knowledge of biological processes by conducting laboratory exercises connected to their Biol115 lecture experiences.

Communicate: Students will become conversant in the language used in biology, and will practice the language of biology in short writing assignments.

Clarify Purpose & Perspective: Students will demonstrate an appreciation of how biology concepts from this class impact their lives.

Practice Citizenship: Students will attain basic biological knowledge, which will allow them to make informed contributions to discussions of issues that impact humans and the environment, for ex: health and medicine, genetic counseling, science education, etc...

COURSE MATERIALS

Required Virtual Labs. McGraw-Hill's Connect system, virtual lab software. This package is automatically included in your UI fees with Inclusive Access (there is nothing to purchase separately from the bookstore). You will create an account for the labs within our course BbLearn site, and access the assignments there, too. Further information will be presented at the beginning of the semester.

Recommended textbook: Freeman *et al.* 2020. *Biological Science*, 7th edition. Same book as used in the Biol115 lecture. The textbook is a good resource for the lab, but is not required.

Course website: <https://bblearn.uidaho.edu/webapps/login/Biol115L>

The course website will include a copy of the syllabus; laboratory instructional materials and assignments, and grades. This will also be my primary form of communication with you outside of class. Check the website often!

ASSESSMENT:

Categories of Assessment

Category	Points
Exams	100
Labs	130
PostLab Exercises	240
Writing Exercises	40

Grading Scale

Total Points	%	Grade
459+	90	A
408	80	B
357	70	C
306	60	D
<306	<60	F

I typically DO NOT curve individual exams **or** the course as a whole, so please don't ask. I round to the nearest whole % for the final grade (example: a total percentage of 89.5 would be rounded up to a 90, while an 89.4 would be rounded down to an 89).

Exams: These will assess your recall and understanding of the topics covered in the labs. Questions will assess your ability to interpret and graph data similar to those from the laboratory exercises, and allow you to demonstrate your factual knowledge of the subject matter.

Labs: Completion of the virtual labs (or any other work assigned to this category) will result in full credit for that week's work. Labs must be completed by 11:59pm on Fridays for full credit.

PostLabs: After completing the Labs, you will complete a question-based assignment to demonstrate your understanding of the material, typically (but not always) within the Connect system. Points are earned for answering the questions correctly. Questions will be a combination of multiple choice and short answer. Postlabs must be completed by 11:59pm on Fridays.

Writing Prompts: There will be 4 short writing prompts throughout the semester to help you connect the coursework to 'real world' applications and practice your technical writing. More information will be provided as these prompts are assigned.

Biol 115L Spring 2021 Schedule

Week	LAB TOPIC	Available	Due
1	Virtual Lab familiarization	13-Jan	22-Jan
2	Lab Safety & Quantification	16-Jan	22-Jan
3	Biomolecules	23-Jan	29-Jan
4	Microscopes*	30-Jan	5-Feb
5	Diffusion&Osmosis	6-Feb	12-Feb
6	Enzymes*	13-Feb	19-Feb
7	Respiration	20-Feb	26-Feb
8	Photosynthesis	27-Feb	5-Mar
9	Midterm Exam	6-Mar	10-Mar
SpringBreak			
10	Cell division	20-Mar	26-Mar
11	Meiosis & nondisjunction	27-Mar	2-Apr
12	Inheritance*	3-Apr	9-Apr
13	Microbes1	10-Apr	16-Apr
14	Microbes2*	17-Apr	23-Apr
15	<i>Review time</i>	April 24-30	
16	Final Exam	1-May	5-May

*Writing prompt associated with this lab

EXCUSED ABSENCES

Only students with major medical/family issues or written official university excuses will be allowed accommodation on assignments. Accommodation may take the form of make-up work or dropping an assignment from the student's grade. Makeup work may differ from the original assignment. *Final acceptance of accommodation is at the discretion of the instructor.* Arrangements must be made at least ONE WEEK PRIOR to your absence in the case of known schedule conflicts (ex: participation in official university sporting events, course field trips, etc...). In the case of an emergency/non-scheduled absence (major medical/family issues), accommodation must be requested immediately following the absence (don't expect to be granted make-up work if a month goes by between the emergency and your request). It is the student's responsibility to document the extent of his/her issue and promptly make a written request for accommodation.

GRADE DISPUTES:

Keep every graded item handed back to you for the entire semester; this is useful for studying as well as insurance against typos when scores are entered into the gradebook. If you feel that an assignment has been graded incorrectly, you have one week after receiving the graded assignment to dispute your score. You must return the assignment to your instructor or TA, along with a written request for re-grading that includes a description of the dispute. Final grade assignment is at the discretion of the instructor or TA.

COMMUNICATION:

Spelling, grammar, punctuation, logic and legible handwriting are critical elements of communication. You may lose points on assignments and exams for misspelling, poor grammar or syntax, improper punctuation, flawed logic or illegible handwriting.

ACADEMIC HONESTY:

Refer to Article II of the UI Student Code of Conduct (<http://www.uidaho.edu/DOS/judicialaffairs/studentcodeofconduct/articleii>). Plagiarism or academic dishonesty will not be tolerated in any form. Offenses will lead to an F on the assignment or in the class, letters to your Department Chair and College Dean, and a formal complaint filed with the Dean of Students. Be aware that even one incident of academic dishonesty may result in expulsion from the university.

ACADEMIC SUPPORT; TUTORING & COLLEGE SUCCESS

TCS offers three distinct services dedicated to student success: tutoring, SI-PASS, and Academic Coaching. Vandal Tutoring provides drop-in style tutoring in person at the Library or online through uidaho.edu/tutoringonline at no cost to undergraduates. SI-PASS provides peer assisted study sessions for difficult courses. You can find the schedule of currently supported courses at uidaho.edu/si. Academic Coaching offers students an opportunity to work with a coach, one on one, to improve their academic skills such as: effective studying, test taking, time management, and note taking. Visit uidaho.edu/academic-coaching to schedule an appointment.

CENTER FOR DISABILITY ACCESS & RESOURCES

Students with disabilities needing accommodations to fully participate in this class should contact Center for Disability Access and Resources (CDAR). All accommodations must be approved through CDAR prior to being implemented. To learn more about the accommodation process, visit CDAR's website at www.uidaho.edu/cdar or call 208-885-6307.

Please notify the instructor during Week One of classes if accommodations are required.

UNIVERSITY OF IDAHO CLASSROOM LEARNING CIVILITY CLAUSE

In any environment in which people gather to learn, it is essential that all members feel as free and safe as possible in their participation. To this end, it is expected that everyone in this course will be treated with mutual respect and civility, with an understanding that all of us (students, instructors, professors, guests, and teaching assistants) will be respectful and civil to one another in discussion, in action, in teaching, and in learning. Should you feel our classroom interactions do not reflect an environment of civility and respect, you are encouraged to meet with your instructor during office hours to discuss your concern. Additional resources for expression of concern or requesting support include the Dean of Students office and staff (885-6757), the UI Counseling & Testing Center's confidential services (885-6716), or the UI Office of Human Rights, Access & Inclusion (885-4285).

FIREARMS POLICY

"The University of Idaho bans firearms from its property with only limited exceptions. One exception applies to persons who hold a valid Idaho enhanced concealed carry license, provided those firearms remain concealed at all times. If an enhanced concealed carry license holder's firearm is displayed, other than in necessary self-defense, it is a violation of University policy. Please contact local law enforcement (call 911) to report firearms on University property."