

# BIOL 115-01 & 02: CELLS & THE EVOLUTION OF LIFE

## Syllabus, Spring 2021

### INSTRUCTOR INFORMATION

Mary Oswald, Ph.D.

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Office: Life Sciences South 260

208-885-4095

Tentative Office Hours: Tues/Thurs, 9-10am; or by appointment (scheduled via email or VandalStar)

*I will communicate with you by university-sponsored email. Please be sure to check your UIdaho 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 TIME/LOCATION:

**In-person** or **Zoom**: MWF, 8:30-9:20am, Bruce Pittman Center, Vandal Ballroom

**Asynchronous On-line**: learn asynchronously via materials posted to BbLearn

### PREREQUISITE:

You must have passed CHEM 101 or CHEM 111 to enroll in BIOL 115.

### COURSE DESCRIPTION/FORMAT:

In this course, you will be introduced to the cell, heredity, and related scientific research. Specific topics to be introduced include: the chemistry of life, cell structure and function, meiosis and mitosis, inheritance, and gene expression.

Students often find the Biol115 material to be complex and somewhat difficult to learn. I thus typically use a variety of active learning techniques in class to assist students in learning the material, and require attendance. Unfortunately, during a pandemic many students struggle with attending class on a regular basis. **The solution I am using this semester is to ‘flip’ the classroom.**

The basic format of a flipped classroom is to post materials for students to review before they come to class, then use class time to explain things in more detail or work through problems to further student understanding. This requires students to put in time learning the material outside of class on a regular basis, and helps them better grasp complex material.

### How this will work in our class

I will post study guides, reading assignments, and lecture recordings on BbLearn for everyone to access. The intent is that students will use these items to learn the basic material of the course. To incentivize staying on top of the material (and check student understanding), there will be short on-line homework assignments associated with the material that are required for everyone. Students can choose to deepen their learning by either attending class synchronously (**Zoom** or **in-person**) to go over problems, have group discussions, etc or by accessing the same in-class materials **asynchronously** and working through them independently. **My assumption is that if you show up for class (Zoom or in-person) you have done the necessary at-home preliminary work and are actively wanting to engage with me and the material that day.** If you attend class, you can expect quiz-style questions, group and whole-class discussions, short videos, problem solving, and other activities on any given day. You will be expected to fully participate in these activities if you attend.

**I am NOT requiring attendance.** If you choose not to attend in-person on a given day, you do not have to let me know. **If you attend class in-person, masks/face coverings are required, per UI policy.**

#### COURSE OBJECTIVES:

The over-arching goal of Biol 115 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
- a better understanding of how he/she learns
- increased awareness of study habits helpful in science
- knowledge of the learning resources available to help them succeed

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

*Learn & Integrate:* Students will synthesize previous biological knowledge with knowledge gained from lectures, assignments, and group work, to attain an understanding of the cell and heredity.

*Think & Create:* Students will synthesize and apply their knowledge of biological processes by forming hypotheses and discussing problems in class.

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

*Clarify Purpose & Perspective:* Students will gain an understanding of cellular processes that support life (including human life), and how the genetic code informs life.

*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 online material:** *Modified Mastering Biology for Freeman, Biological Science, 7<sup>th</sup> Ed* (Pearson) – access code required, available through a **link in Bblearn** (this is the cheapest option) or at the UI Bookstore. You have two subscription length options – 18weeks and 24months. If you anticipate only taking this course, the 18week option through BbLearn is the cheapest. However, I use the same system in both Biol114 & 115, so if your course plan has you taking both of these courses, the 24month subscription through BbLearn is the cheapest way to go (also covers you if you need to retake a course). For those of you waiting on financial aid or other funds, there is a free 2-week trial available to cover access at the first of the semester. **Warning:** purchasing the access code through other sources may result in an unusable code! More purchasing info is available on BbLearn. If you have already taken a course from me recently, your access should be automatic (no further payment necessary).

**Required textbook:** Freeman *et al.* 2020. *Biological Science*, 7<sup>th</sup> edition, Pearson publishing. Included as an e-book when you purchase the above Mastering access code through the Bookstore or BbLearn (in BbLearn you may also choose to buy the Mastering without the etext if you already have access to a physical book & don't want the ebook). May also be purchased as a hard copy book separately through BbLearn if you want one. Reading assignments will be listed on the course website and syllabus. These should be read ahead of time in preparation for the class time for which they are listed.

**Clicker:** i>Clicker remotes (or the i>Clicker app REEF Polling) are **recommended (but not required)**. **In-person students** may use either the remote or app to participate in class. **Zoom students** need to use the app (the remotes don't work outside the classroom). **Asynchronous on-line students** do not need the app or a remote (since they're asynchronous). Paying for a year or more's app access up front is recommended if you are taking more than one course from me, or Biol310 (genetics). Once a subscription to REEF is purchased, you can use it in multiple classes while that subscription is valid (you don't have to buy it separately for each class). Remotes are available from the UI Bookstore, on-line stores, or your friends. 'Used' remotes are acceptable.

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

The course website will include a copy of the syllabus, lecture materials, access to MasteringBiology, links to supplementary material, 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
Mastering Assignments	280
Exams	400

##### Grading Scale

Total Points	%	Grade
312+	90	A
554	80	B
476	70	C
408	60	D
<408	<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).*

##### Grade Reports

Grades will be updated regularly in BbLearn/My Gradebook. You should check these grades periodically for any mistakes in entry and to check that your overall performance is on track. **You have one week after a grade is posted to contest it.**

For formal grade reporting, Early Warning Grade notifications (D/F/participation issues) use the VandalStar Progress Surveys system, while Midterm and Final grades are officially entered in VandalWeb.

##### MasteringBiology

You will complete on-line assignments in order to help you understand the material and practice articulating that understanding. Questions will be similar to what may be found on exams. These assignments will be found on BbLearn/UnitInfo/Unit \_\_\_ at the bottom of the page, or on the Bblearn/Mastering Links/Mastering Assignments page. Assignments will open a week before the material is covered in class, and are due by **11:59pm the night before that class** (dates indicated on the Course Schedule and the Mastering Assignments calendar).

It is your responsibility to finish the assignments before each closes. Keep in mind that computer/internet issues can arise, so it is in your best interest to plan ahead and complete them earlier in the week. For Excused Absences that extend beyond the open period, refer to the Excused Absences section below.

## **Exams**

There will be four 'regular' exams, plus one final exam, administered on-line using BbLearn, each worth the same amount of points. Your lowest exam score will be dropped at the end of the semester (only the highest four will count towards your final grade). With the exception of Excused Absences (see self-titled section below), there are NO makeup exams!

Exams will cover material from lectures, assigned readings, assigned content on Mastering, and in-class exercises. The material we will cover builds upon itself. We will often refer back to concepts covered in previous lectures and units. For this reason, all exams are comprehensive, though the focus of each regular exam will be on the current unit. The final exam is comprehensive of the entire semester.

## **EXCUSED ABSENCES**

Only students with major medical/family issues or written/mailed 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 calculation. 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/mailed 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 may lead to a zero 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](http://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](http://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](http://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](http://www.uidaho.edu/cdar) or call 208-885-6307.

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

#### CLASSROOM BEHAVIOR

The following behaviors are rude to the instructor and fellow students, and are considered unacceptable behavior for class and lab: ringing cell phones, use of cell phones for talking or texting, web surfing, sleeping, reading extraneous material, chatting with neighbors (this includes the Zoom Chat area), etc... I reserve the right to dismiss students from class (with appropriate grade deduction for missed assignments) that display any of these behaviors. Repeated violations may result in an F on that day's work, an F in the course, and/or removal from the course.

#### 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."