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BIOB 101N.500: Discover Biology

Ashley L. Preston

University of Montana, Missoula, ashley.preston@umontana.edu

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Biology 101N: *Discover Biology* online**Fall 2022**

Class meets	Online through Moodle
Course runs	August 29 – December 16
Instructor	Ashley Preston Ashley.preston@umontana.edu MC405
Office Hours	MC405 MW 12:30 - 1:30; or by appt. (Face to face or Zoom)
Resources	Core Content: Custom text available on Moodle (and the UM bookstore if you prefer print) Laboratory: Lab instructions are available through Moodle each week

Course Content:

We will explore the chemical and cellular bases of life, genetics, evolution, biodiversity, and human impacts on the living world. Core goals include developing a deeper understanding of the living world and helping all of us make well-informed decisions about issues with a biological component. Specific course objectives include:

- Understand fundamental biological concepts and theories
- Appreciate the importance of matter, energy, and organization in life
- Identify patterns of interactions in living systems at different scales

For general education natural science requirements, upon completion of this course, a student will be able to:

- understand the general principles associated with the discipline(s) studied
- understand the methodology and activities scientists use to gather, validate and interpret data related to natural processes
- detect patterns, draw conclusions, develop conjectures and hypotheses, and test them by appropriate means and experiments
- understand how scientific laws and theories are verified by quantitative measurement, scientific observation, and logical/critical reasoning
- understand the means by which analytic uncertainty is quantified and expressed in the natural sciences

How to succeed in this course:

Regular participation is critical to success in this course. The main advantage of online learning is making your own schedule and working when you want during the week. This, though, does not mean there are no deadlines for work submission and completion of assignments. Regular participation each week is required to interact with classmates, explore biology at a reasonable pace, and reflect on your learning in a meaningful way. You are encouraged to interact with online course materials a minimum of three times each week. Contact your instructor with any questions.

Class structure:

This course follows a reliable pattern. Each week's materials will be available by 11:00am each Monday morning, and due before 11:55pm Sunday night (after participating in discussions by Thursday each week). Your weekly responsibilities are to:

- Complete the assigned reading
- Contribute to group discussions
- Work through lab activities and submit a written lab report
- Complete the weekly quiz

Course Policies:

Late assignments and quizzes are not accepted. Be prepared for the unexpected by submitting work early to avoid last-minute challenges. Please use Moodle for all assignment submissions. All features of the [UM student](#)

[conduct code](#) will be followed in this course. Students registered with DSS will be accommodated as appropriate. University policies on drops, adds, changes of grade option, or change to audit status will be followed in this course. A grade of C or higher will be considered passing for the P/NP option.

Grading:

Weekly discussions (15 @ 25 pts)	375 pts	90-100% = A- to A
Lab reports (highest 12 of 13 @ 25 pts)	300 pts	80-89.99% = B- to B+
<u>Quizzes (highest 13 of 14 @ 25 pts)</u>	<u>325 pts</u>	70-79.99% = C- to C+
Total	1000 pts	60-69.99% = D- to D+
		<60% = F

Weekly activities: Your first discussion post in each topic (your first 3 posts every week) must be submitted by **Thursday, 11:55pm** each week to allow time for others to respond by the Sunday deadline. **All** other assignments and quiz submissions are due by **Sunday at 11:55pm** each week. You are strongly encouraged to work on weekly activities well ahead of the Sunday evening deadline; give yourself time for the unexpected because deadlines are absolute. Some weeks might have more reading and a shorter lab activity or vice versa, but the schedule is designed to give you a reliable workload reflecting the expected 6-9 hours of work each week for a three-credit course. Your weekly responsibilities are outlined below:

Reading: Each week will focus on a few chapters from our class textbook. The content from these readings will make up most of what we revisit in our weekly quizzes. Note that the entire textbook is available for download near the top of our Moodle page, and it can also be purchased in the UM bookstore if reading from paper is preferred. The textbook is an ongoing project designed to bring you an affordable, up-to-date textbook presented in everyday language with contributions from past students. You can help make it stronger by letting your professor know if you see an opportunity to add content, update a topic, or improve the writing in a particular section.

Group Discussions: You will be assigned to a small group every week for discussions; these groups will change each week. The purpose of these discussions is to assist learning in a collaborative format that demonstrates your understanding of core concepts. Weekly discussions will center around three questions from your instructor. At a minimum, you should post 2 thoughtful contributions per topic each week, with your first submission to every topic each week posted by Thursday. This translates to a *minimum* total of **6 meaningful posts per week**. Your lowest score will be dropped from your course grade to accommodate a rough week or unexpected circumstances. Evaluation will be based upon these criteria:

- posts are on time
- posts are original, well-written, substantive, and thoughtful contributions to the discussion
- posts are scientifically accurate, supported by evidence (sources), and relevant to the topic

Lab Activities and Lab Reports: Each week will include an online lab investigation outlined in a lab instruction sheet (found in the week's topic in Moodle). Labs in this course are free and require no additional materials. You will first complete the activities and then submit a summary of your lab experience by responding in your own words to the questions in the lab instructions. **Lab reports do not need to be longer than one page, and can simply be a list of your answers to lab questions.** Your lowest lab report score will be dropped from your course grade. Topics from lab activities will be included in weekly quizzes. Lab reports will be evaluated based upon the following:

- thoughtful responses to lab questions
- meaningful reflections on the experience
- clear demonstration of having thoroughly worked through lab activities

Weekly Quizzes: Each week includes a quiz covering that week's content. Questions will be roughly 2/3 from reading and discussion content and 1/3 from labs. Quizzes are open to any resource you wish to use, but are

limited to a half hour, so there will not be enough time to look everything up. The purpose of the quizzes is to ensure that you have worked thoroughly enough through the reading and lab activities to demonstrate mastery of core biology concepts. Your lowest quiz score will be dropped from your course grade for any reason. Therefore, no make-up or late quizzes will be offered. Quiz grades will be available once the quiz closes after midnight, Sunday night.

Course Accommodations Statement (DSS)

Students with disabilities may request reasonable modifications by contacting me. The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and [Disability Services for Students \[DSS\]](#). “Reasonable” means the University permits no fundamental alterations of academic standards or retroactive modifications. If you think you may have a disability adversely affecting your academic performance, and you have not already registered with DSS, please contact DSS in Lommasson 154, call 243-2243 (voice/TDD), or see <http://www.umt.edu/dss/>. I will work with you and DSS to provide an appropriate modification.

Make an appointment or stop by (via Zoom) during office hours to talk about your accommodations and how to use them for this course. If you plan on using an accommodation for an assignment, you must let me know in advance. I will do my best to grant the accommodation if it does not undermine the objectives of the assignment. However, you must contact me prior to the due date—even better, prior to the start of the assignment—to let me know if you will need to use an accommodation that allows for an extension on the deadline. I cannot grant a deadline extension retroactively.

Important Dates and Deadlines (Registrar’s Office)

Click on <https://www.umt.edu/registrar/calendar.php> to see the calendar for important dates and deadlines about adding, dropping, payment, withdrawals, etc.

Student Conduct Code

In an effort to ensure that students are informed about the consequences of academic misconduct, the Academic Officers of The University of Montana have determined that the following statement must be present on every course syllabus. You will be held to these standards in this course.

All students must practice academic honesty. Academic misconduct is subject to an academic penalty by the course instructor and/or a disciplinary sanction by the University. All students need to be familiar with the [Student Conduct Code](#).

Plagiarism will not be tolerated. The U of M’s student Conduct Code defines plagiarism as “Representing another person’s words, ideas, data, or materials as one’s own or the student’s own previous work as if it were the student’s own original work.” Students may be asked for their research or sources at any time. Plagiarism will be handled in strict accordance with the University of Montana Student Conduct Code: http://www.umt.edu/vpsa/policies/student_conduct.php.

Email policy at UM

According to the University email policy effective on 1 July 2007, an “employee must use *only* UMM assigned student email accounts for all email exchanges with students, since such communication typically involves private student information.” This means that you *must* send any correspondence through your official UM student email account. For more information on setting up and using your official UM student email account contact tech support.

My email policy: I check emails M – F between 8 a.m. and 5 p.m. MST. I do not check emails on weekends or holidays. Since most of your assignments are due on the weekends, I strongly encourage you to access assignments and materials during the week to get any questions answered or concerns addressed.

Diversity, Equity, and Inclusivity

Missoula College values the diversity of its students, faculty, and staff as an essential strength that contributes to our shared educational mission. Students of all backgrounds and perspectives are recognized and respected in this class. Course content and activities are intended to honor diversity of gender, sexuality, ethnicity, race, culture, religion, age, disability, socioeconomic status, and all dimensions of diverse human experiences and their intersection. Please notify your instructor if components of this course present barriers to your inclusion. Students can also reach out to Dr. Salena Beaumont Hill in the [Office of Inclusive Excellence for Student Success](#), which provides student support for BIPOC and LGBTQ+ students and student groups. To explore making a formal report about discrimination or harassment, please visit the [Equal Opportunity / Title IX office](#). For counseling or advocacy related to discrimination, please visit [SARC](#).

BIOB 101N: Online Course Schedule

Unless otherwise noted, every week asks you to meet the following tasks:

- Complete assigned reading
- Participate in group discussions
- Work through lab activities and submit written lab report
- Complete weekly quiz

Your first discussion posts in all three topics each week are due by Thursday before midnight. All other responsibilities are due before 11:55pm Sunday night. The semester begins August 29.

Week 1 (ends 9/4)	Introduction to course and science <i>no lab</i>	Chapters 1-2
Week 2 (ends 9/11)	Chemical basis of life	Chapters 3-6
Week 3 (ends 9/18)	The cell	Chapters 7-10
Week 4 (ends 9/25)	Respiration and Photosynthesis	Chapters 11-14
Week 5 (ends 10/2)	Cell division and Cancer	Chapters 15-16
Week 6 (ends 10/9)	Genetics	Chapters 17-19
Week 7 (ends 10/16)	Gene expression and Genetic engineering	Chapters 20-22
Week 8 (ends 10/23)	Evolution	Chapters 23-25
Week 9 (ends 10/30)	Classification of life	Chapters 26-28

Week 10 (ends 11/6)	Prokaryotes, protists, and plants	Chapters 29-31
Week 11 (ends 11/13)	Fungi and Animals	Chapters 32-34
Week 12 (ends 11/20)	Ecology and Populations	Chapters 35-37
Weeks 13-14 (end 12/4)	Human population and effects	Chapters 38-40
Week 15 (ends 12/9(11))	Biomes and Dynamic ecosystems	Chapters 41-43
Week 16 (ends 12/13)	Final Discussion Forum <i>no lab or quiz</i>	