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Spring 1-2016

### BIOB 101N.50C: Discover Biology

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**Class Meets exclusively online through Moodle**

**Instructor:** Greg Peters. Contact: greg.peters@mso.umt.edu or (406) 207-6154  
**Resources:** Lecture: Custom text available through Moodle and in the *Missoula College* bookstore if you prefer reading on paper.  
 Laboratory: Lab instructions are available through Moodle.  
*Do not* purchase the lab manual for the face-to-face class.

**Course Content:**

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

- Understand and apply the scientific method of investigation
- Use critical thinking to evaluate scientific arguments
- Understand fundamental biological concepts and theories
- Understand matter, energy and organization in biological systems
- Identify patterns of interaction in living systems at different scales

**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. 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 course materials online at a minimum of three times each week. Please contact your instructor

**Class structure:**

This course follows a reliable pattern of weekly activities. Each week’s materials will be available no later than 9:00am Monday morning, and due before 11:55pm Sunday night. 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 will not be accepted. Be prepared for the unexpected; complete and submit work early to be certain to avoid any last minute challenges. Please use Moodle for all assignment submissions.

Students registered with DSS will be given disability accommodation during quizzes. University policies on drops, adds, changes of grade option, or change to audit status will be followed in this course. Please note that after the 45<sup>th</sup> day of the semester, such changes are not automatically approved. 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% = B- to B+
<u>Quizzes (highest 13 of 14 @ 25 pts)</u>	<u>325 pts</u>	70-79% = C- to C+
Total	1000 pts	60-69% = D- to D+
		<60% = F

**Weekly activities:**

All assignments and quiz submissions are due by **Sunday at 11:55pm** each week. The one exception is that your first discussion post in each topic (your first 4 posts) must be submitted by **Wednesday, 11:55pm** each week, to allow time for others to respond.. You are strongly encouraged to work on weekly activities well ahead of the Sunday evening deadline. Your weekly responsibilities are outlined below in more detail:

**Reading:**

Each week will focus on a few chapters from our class textbook. The content from these readings will make up the bulk of what we revisit on our weekly quizzes.

**Group Discussions:**

You will be assigned to a group with whom to participate in weekly discussions. The purpose of these discussions is to assist your learning in a collaborative format and ask you to demonstrate your understanding of core concepts from reading and lab activities. Weekly discussions will center around three questions initiated by your instructor and a fourth thread related to improving the textbook. Our textbook is inexpensive, interactive, and regularly updated because it is maintained by student contributions. At a minimum, you will need to post 2 thoughtful contributions per discussion topic each week, with your first submission to every topic each week posted no later than Wednesday. This translates to a minimum total of **8 posts per week**.

Evaluation of Discussion Forum posts will be based upon the following criteria:

- posts are on time
- posts are original, well-written, and thoughtful contributions to the discussion
- posts are scientifically accurate

**Lab Activities and Lab Reports:**

Each week will include online lab investigations outlined in a lab instruction sheet. You will complete the activities as outlined and complete a written lab report reflecting on your lab exercise. Labs in this course are free and require no additional materials. Topics from lab activities will be included in weekly quizzes. After you complete each week's lab, you will submit a summary of your lab experience, responding to specific questions and tasks outlined in the lab instructions. Lab reports should be no longer than one page. Your lowest lab report score will be dropped from your course grade. Lab reports will be evaluated based upon the following criteria:

- 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 materials. Quiz questions will be sourced approximately 2/3 from reading and discussion content, and 1/3 from lab activities. 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.

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 8-9 hours of work each week for a three-credit course.

## BIOB 101N: Online Course Schedule

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

- Complete assigned reading
- Participate in group discussions
- Work through lab activities
- Submit written lab report
- Complete Weekly quiz

Your first discussion posts in all three topics each week is due by Wednesday. All other responsibilities are due before 11:55pm Sunday night.

Week 1 (ends 1/31)	Introduction to course and science no lab week 1	Chapters 1-2
Week 2 (ends 2/7)	Chemical basis of life	Chapters 3-6
Week 3 (ends 2/14)	The cell	Chapters 7-10
Week 4 (ends 2/21)	Respiration and Photosynthesis	Chapters 11-14
Week 5 (ends 2/28)	Cell division and Cancer	Chapters 15-16
Week 6 (ends 3/6)	Genetics	Chapters 17-19
Week 7 (ends 3/13)	Gene expression and genetic engineering	Chapters 20-22
Week 8 (ends 3/20)	Evolution	Chapters 23-25
Week 9 (ends 3/27)	Classification of Life	Chapters 26-28
Week 10 (ends 4/3)	Prokaryotes, protists, and plants	Chapters 29-31
Break Week (ends 4/10)	<i>No class: Spring Break</i>	
Week 11 (ends 4/17)	Fungi and Animals	Chapters 32-34
Week 12 (ends 4/24)	Ecology and Populations	Chapters 35-37
Week 13 (ends 5/1)	Human population and effects	Chapters 38-40
Week 14 (ends 5/8)	Biomes and dynamic ecosystems	Chapters 41-43
Finals Week:	Final Discussion Forum. All posts due by Wednesday, 5/11	