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BIOE 172N.01: Introductory Ecology

H. Maurice Valett

University of Montana, Missoula, maury.valett@umontana.edu

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BIOE 172N, Introductory Ecology, Section 01– Spring 2022
Division of Biological Science, University of Montana

I. Course Information:

Course Id and CRN: BIOE 172 R01: CRN 32467 (3 credits)
Time and place: M/W 10:00-11:20PM, HS 207

II. Contact Information:

Instructor: Dr. Maurice Valett
Office & hours: HS 513A, Office hours, M 2:00-3:30 W 3:00-4:30 PM
(or by Zoom as needed; best given COVID restrictions)
Phone: 406-243-6058
Email: maury.valett@umontana.edu

III. Course Description

BIOE 172 provides an overview of the science of ecology including its focal inquiries, theoretical foundations, and modern applications. Students will be exposed to the range of specialties within ecology, their distinctions and commonalities, and develop the ability to understand the ecological character of many contemporary environmental issues.

IV. Course Outcomes

A) Learning outcome 1

Developed ability to read and interpret graphical scientific data in the context of ecological investigations

B) Learning outcome 2

Established ability to discuss and assert general principles associated with ecology as they pertain to ecological investigations

C) Learning outcome 3

Development of fundamental skills necessary to interpret scientific concepts associated with ecology as they appear in the popular press

D) Learning outcome 4

Acquisition of a composite understanding required to apply concepts fundamental to ecology and its approaches to assessment of real-world problems influencing natural and human systems

V. Required Texts, Readings, and other Resources

A) Text – SmartBook and Connect

The course will rely heavily on an electronic textbook. We will use the 9th edition of Molles and Sher - Ecology: Concepts and Applications (McGraw Hill). The text is a SmartBook 2.0 facility that provides guided readings, questions, quizzes, and exams that we will use over the course of the semester.

BIOE 172N is included in the UM bookstore's Inclusive Access Program. This program grants you access to your required course materials by the first day of class at the discounted rate the bookstore has negotiated on your behalf. Your student account has already been charged this discounted rate. If for any reason you decide to drop the course, you can opt-out of this program by the add/drop deadline and will receive a refund to your student account (see below).

B) Access to Connect

1) Initiating access

The integrated textbook and facilities are provided as a SmartBook and Connect (the associated on-line facilities). You can register for this section and access the facility by using the following link:

https://connect.mheducation.com/class/m-valett-spring_2022-intro-to-ecology

Note: This link is also available through the Moodle site (see below).

2) Orientation to the SmartBook and Connect

i) Video summary of SmartBook/Connect

The link provided below is a 15-minute video providing an overview of these facilities and is a useful orientation. This link is also provided in Moodle.

[Link to College Smarter Not Harder McGraw-Hill Connect](#)

ii) Instructional videos assignment (no points)

Once you have obtained electronic access to Connect, complete the assignment entitled 'Connect Orientation Videos' to provide an overview of Connect.

3) Support for access to Connect

This is my first time using an integrated textbook. I am unlikely to be a useful resource in these areas of concern. If you have any trouble accessing your course material, please feel free to visit the Connect Student Support Tools page at the following address:

[McGraw-Hill Connect Student Support](#)

Note: This link is also available through the Moodle site (see below).

This on-line facility provides several videos for a range of potential issues (e.g., Getting Started, Completing Assignments, Accessing eBook). If you scroll to the bottom, you will find the opportunity for electronic chat and other means of communication with Connect Student Support. You can also call for support: 800-331-5094

C) Opting out of the SmartBook and Connect (i.e., refund for course withdrawal)

To opt-out of Inclusive Access, you will have until Jan. 25, 2022 to complete the following process, receive a refund for your fees, and drop the course. Note: these electronic facilities are required to remain enrolled in the course.

Go to the 'Opting out of SmartBook via RedShelf – Link' folder in Moodle and follow the instructions there. The folder includes an external tool to allow you to complete the process. There is also a link for access to RedShelf to obtain information as needed.

The steps include the following:

- Click the RedShelf link in Moodle
- Click View Course Materials
- Scroll down to the grey opt-out button and follow the prompts

Use the following link if you have trouble with this aspect of the process: [RedShelf Solve](#).

Note: This link is also available through the Moodle site (see below).

D) Moodle and Other Resources

Course resources will be managed via Moodle (<https://moodle.umt.edu/>) and include:

1) McGraw Hill and RedShelf Links

The first two folders in Moodle provide access to SmartBook and Connect. The first folder (Opting out of SmartBook via RedShelf – Link) includes the mechanism for refund upon course withdrawal by the Jan 25 deadline. The second folder provides the link to McGraw Hill Connect and a link to student support.

2) Syllabus

An electronic version of this syllabus will be available on Moodle as a PDF file with active links for your reference and use. You will be alerted to any changes made to the syllabus and the version on Moodle will be promptly updated.

3) Lecture handouts

Lecture outlines that will include definitions and supplementary materials will be available on Moodle as MS Word files. Students are encouraged to use these files and augment them as study guides. In general, however, it is best not to use printed versions of the handouts for note-taking purposes. Notes are better taken on separate pages.

4) Lecture PPT files

PowerPoint files used by the instructor will be made available on the Moodle site as PDF files.

5) Zoom

I will provide Zoom access for all lectures through the following link:

<https://umontana.zoom.us/j/4677264889>

I will not accommodate all classroom components through Zoom. Come to class!

6) Moodle Gradebook

I will use the Moodle Gradebook to provide you access to your evolving scores.

Those scores, however, will come from homework and exams completed via Connect. I will transfer scores from Connect to the Moodle Gradebook, Note that the Gradebook provides a value of zero to any homework or exams that have not yet been taken. Accordingly, the percent score calculated as a final will not accurately represent your final score until all grades are entered. Please keep track of your evolving total using the data from the Gradebook.

VI. Course Requirements

A) Attendance, exams, and homework

1) Attendance

Attendance is expected and necessary. Students cannot contribute or receive if they are not present. Attendance will be addressed randomly through five 'attendance counts' over the course of the semester. Students will be rewarded with 2% scores for each date on which they are registered as present.

The instructor recognizes that occasional absence may occur due to a variety of reasons. Any absence can be considered excused **if and only if** the student provides via email an indication of absence. This should be accomplished by providing '***missing class today***' (no quotes) as the subject line on an email to the instructor time-stamped prior to the 10 AM start of class on the day of class. I will use an electronic search for the specific string ***missing class today*** to assess excused absences. This requires that the subject line include the EXACT text: ***missing class today***. Any deviation from that form on the subject line will cause the email to be considered null. Follow these directions exactly! Any email time-stamped after 10:00AM will not provide an excused absence. If a student is absent during one of the five attendance assessment days but has provided an email meeting the above requirements, they will receive the 2% reward offered to attending students.

I am giving you the opportunity to be awarded 10% of your grade...guaranteed. You, however, must manage the opportunity appropriately.

2) Homework

Three SmartBook (SB) homework assignments will be assigned over the course of the semester. These SB homework activities include directed reading and chapter questions that will help you prepare, and review material covered in class. I have specifically chosen the parts of the book that are relevant. Note that these homework assignments do not specifically cover all the material that will be on the exam. Homework assignments are due by the end of the workday (5 pm) on Feb 4, Mar 18, and Apr 22. No late work will be accepted (i.e., electronically unavailable after the due date) and no credit will be given for those who do not turn in homework on time.

The three homework assignments will constitute 45% of the course grade (see below).

3) Exams

Three exams are offered during the semester on the dates indicated in the class schedule below: Feb 28, Apr 4, and May 4. **Exam dates will not be moved.** Each exam will be executed through the Connect interface and will be of 80-minute duration covering only the specific material indicated in the class schedule below. The third exam will serve as the 'last' exam. That exam will cover only the material provided since the last exam (i.e., not a comprehensive final exam). Exams will be closed book, cover all materials presented since the beginning of class or the prior exam, and will consist of fill-in-the-blank, T/F, multiple-choice, or short-answer questions.

The three exams will constitute 45% of the course grade (see below).

Exams may be taken early only as the result of an official university conflict and only if scheduled ahead of time with the instructor. No exam can be taken after its scheduled date. No 'make up' exams will be offered. IMPORTANT! Any missed exams will be scored as 0%.

B) Policies on student conduct

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 available at the following link: [Student Conduct Code](#)

- Come to class, even if you are late - be prepared to listen and engage in the day's topics,
- Keep cell phones and other electronic devices turned off during class
- Respect your colleagues by refraining from disruptive behavior, including engaging in non-class related activities during lecture
- Foster academic honesty
- Establish study partners (2 others) from whom you may acquire notes as needed (see Covid policy below)

C) Grading and grading scales

- 1) Grading scale – all students will receive a grade
(Credit/No Credit option is not available at any time)

Homework (3): 45%
Homework I: 10% Homework II: 15%
Homework III: 20%

Exams (3): 45%
Exam I: 10% Exam II: 15%
Exam III: 20%

Attendance (5): 10% (5 random assessments, 2% each)

Grading scale:

93-100	= A
90-92	= A-
87-89	= B+
83-86	= B
80-82	= B-
77-79	= C+
73-76	= C
70-72	= C-
60-69	= D
59 and below	= F

2) Grades and compensation

Each student will receive the grade they earn. Students are responsible to keep track of their own grade. Grades for each component can be viewed via Moodle. Please bear in mind that extra credit will not be offered to individual students. Under no circumstance will individual students be offered extra credit opportunities to compensate for poor performance at any point, including after final grades are submitted.

VII. Other Information

A) Accommodations

1) Disabilities:

The University of Montana assures equal access to instruction through collaboration between students with disabilities, instructors, and the [Office for Disability Equity](#) (ODE). If you anticipate or experience barriers based on disability, please contact the ODE at (406) 243-2243, ode@umontana.edu, or visit www.umt.edu/disability for more information. Retroactive accommodation requests will not be honored, so please, do not delay. As your instructor, I will work with you and the ODE to implement an effective accommodation, and you are welcome to contact me privately if you wish. If you would like to request reasonable accommodations, you are advised to provide your ODE verification letter to your instructor in the first week of class so appropriate arrangements can be made. If you decide after the semester begins to disclose your disability and request accommodations, you should provide documentation, if possible, at least 10 days before the upcoming assessment so I may prepare appropriately. It is the responsibility of students to make sure they understand the types of modifications available to them before assessments.

2) Covid policy:

- Mask use is required within the classroom or laboratory.
- If you feel sick and/or are exhibiting COVID symptoms, please don't come to class and contact the Curry Health Center at (406) 243-4330.
- If you are required to isolate or quarantine, you will need to have mechanisms by which to receive the necessary material. To do this, you need to establish study partners. Trade information with two class members who will serve as your 'partners'. In this way, you can ask for their notes and you will be prepared to provide them notes in the case of sickness.
- UM recommends students get the COVID vaccine and booster. Please direct your questions or concerns about vaccines to the Curry Health Center.
- Drinking liquids and eating food is discouraged within the classroom.

B) Grievance Procedures

The formal means by which the course and instructor quality are evaluated is through the written evaluation procedure at the end of the semester. The instructor and department chair receive copies of the summary evaluation metrics and all written comments once course grading is completed and submitted. Students with concerns or complaints during the semester should first communicate these to the instructor (verbally, not via email). If the student does not believe the issue has been resolved appropriately after meeting with the instructor, the student should contact the Associate Dean of the Division of Biological Sciences.

VIII. Course Schedule (draft version – subject to change)

<u>Day/Date</u>	<u>I. The ecology of individuals</u>	
W Jan 19	Introduction & Orientation	Introduction and Syllabus Review; Introduction to Life on Land
M Jan 24	Life on Land – Ch 2	Climate and Biomes
W Jan 26	Life in Water – Ch 3	Oceans, Streams, and Lakes
M Jan 31	Temperature Relations – Ch5	Temperature and Regulation
W Feb 2	Water Relations – Ch 6	Heat, Water, Salts, and Regulation
F Feb 4	Assignment Due	SB Ch 2,3,5,6 Review Questions
M Feb 7	Energetic and Nutrients I	Metabolism
W Feb 9	Energetic and Nutrients II	Trophic Dynamics
M Feb 14	Population Ecology 1	Population Distribution and Abundance
W Feb 16	Population Ecology 1	Population Dynamics

<u>Day/Date</u>	<u>II. Populations & species interactions</u>	
M Feb 21	no class	President's Day
W Feb 23	Population Ecology 2	Exponential Growth
M Feb 28	Exam 1	Life on Land and in Water, Temperature and Heat, Population Distribution and Dynamics
W Mar 2	Population Ecology 2	Carrying Capacity and Logistic Growth
M Mar 7	Species Interactions I	Competition and Niche
W Mar 9	Species Interactions 2	Exploitation and Mutualism
M Mar 14	Communities and Diversity 1	Diversity, Richness, Evenness
W Mar 16	Communities and Diversity 1	Disturbance and Diversity
F Mar 18	SB Assignment #2	SB Ch 11,13, 14, 15 Review Questions

<u>Day/Date</u>	<u>III. Communities and ecosystems</u>	
M Mar 21	no class	spring break
W Mar 23	no class	spring break
M Mar 28	Food Webs 1	Food Webs
W Mar 30	Food Webs 2	Keystone and Dominant Species
M Apr 4	Exam 2	Logistic Growth, Species interactions, diversity, food webs
W Apr 6	Ecosystems 1	Primary and Secondary Production
M Apr 11	Ecosystems 1	Primary and Secondary Production
W Apr 13	Ecosystems 2	Decomposition

<u>Day/Date</u>	<u>IV. Succession and Global Ecology</u>	
M Apr18	Succession I	Community Succession
W Apr 20	Succession 2	Ecosystem Succession
F Apr 22	SB Assignment 3	SB Ch 18, 20
M Apr 25	Global Ecology 1	Nitrogen and Population Dynamics
W Apr 27	Global ecology 2	Global Change and Climate
M May 2	Review	Q&A for Global Ecology and Review for Exam IV
W May 4	Exam III	Ecosystems, Succession, and Global Ecology