

Mayville State University

BIOL 151 – General Biology II

Dr. Joseph Mehus

Spring, 2023

3 Semester Hours

Contact Information:

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Hours of Availability:

Available via email as needed; arranged Skype for Business meetings as requested

Instruction Mode:

Online asynchronous

Time Zone:

All times listed in this course/syllabus/course content is in Central Standard Time (CST)

Course Description

This course will survey the three domains of living things including archaea, bacteria, Protista, fungi, plants, and animals. This course will include historical foundations of taxonomy and evolution, classification, ecology, basic biology, and structures and functions of various organisms.

Pre-/Co-requisites:

Recommended BIOL 151L - General Biology 2 Lab (depending upon student need)

Purpose of the Course

The purpose of Biology 151 is to deepen your understanding of the process of evolution and expand your knowledge of the tree of life and ecology. We will explore ways evolution occurs, what evidence there is to support it, the different kingdoms of life that have radiated from evolution, how organisms interact with each other and their abiotic environments. Aspects of historical context, science philosophy, and interrelationships among science disciplines will be visited.

Course Objectives

Through numerous instructional strategies and learning experiences, the following outcomes are expected to be met by the learner after completing this course:

- The learner will be able to explain Darwin’s theory of evolution and how natural selection leads to diversification.
- The learner will be able to recognize phylogenetic relationships.
- The learner will be able to explain/identify the diversity of life through use of the “tree of life.”
- The learner will be able to describe the nature and significance of viruses.
- The learner will be able to describe the nature and significance of prokaryotes.
- The learner will be able to describe the nature and significance of protists.
- The learner will be able to describe the nature and significance of the different groups of fungi.
- The learner will be able to describe the nature and significance of the different groups of plants.
- The learner will be able to describe the nature and significance of the different groups of animals.
- The learner will be able to recognize and describe the different ecological relationships among living organisms and their environments.
- The learner will be able to apply ecological concepts to issues facing the Earth’s biological systems.

Program Student Learning Outcomes (SLOs) Addressed in This Course

The Academic Program Student Learning Outcomes document can be found in your course shell. It contains all learning outcomes pertaining to Essential Studies courses and all majors and minors. The document has an index, so you can quickly find the degree you are pursuing.

As part of Mayville State’s effort to demonstrate continuous improvement in achieving student learning outcomes, this course:

<input checked="" type="checkbox"/> introduces SLO # 1 <input type="checkbox"/> reinforces SLO # <input type="checkbox"/> masters SLO # For Major / Minor: <input type="text" value="Biology"/>	<input checked="" type="checkbox"/> introduces SLO #2 <input type="checkbox"/> reinforces SLO # <input type="checkbox"/> masters SLO # For Major / Minor: <input type="text" value="Biology"/>	<input checked="" type="checkbox"/> introduces SLO # 3 <input type="checkbox"/> reinforces SLO # <input type="checkbox"/> masters SLO # For Major / Minor: <input type="text" value="Biology"/>	<input checked="" type="checkbox"/> introduces SLO # 4 <input type="checkbox"/> reinforces SLO # <input type="checkbox"/> masters SLO # For Major / Minor: <input type="text" value="Biology"/>
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Students will be asked to produce a Yuja student video describing a current controversial topic in biology that allows them to express and work through ethical dilemmas. The assessment activity will encompass the SLO’s associated with the current biology program curriculum map. This topic will vary each semester at the discretion of the instructor. This video will be between 5-7 minutes and express their viewpoints on topics that are supported by current biology research (PubMed, Scopus).

Course Improvements Based on Most Recent Assessment Findings

This course will be assessed in the future (based on the 2019-2025 assessment curriculum map) and the findings will be reported in this syllabus.

Required Materials

Raven Biology (12th ed)

Computer that meets the university technology requirements

MS Office

Instructional Strategies

Video Lectures, Outlines, Chapter Reviews

Video lectures and outlines will be posted in Blackboard/Yuja. Outlines (PowerPoints) for each chapter will be provided in Blackboard and correspond to recorded lecture videos found in Yuja. Chapter reviews are required activities and help to prepare students for exams. Course content will open as students complete their work or as deadlines pass. If you desire to work ahead in the course this is acceptable and is encouraged as to prevent missing deadlines. If you complete a section and new content does not open for you, please let me know and I will give you early access.

Quizzes

Quizzes will be given for each chapter in Blackboard. These quizzes will contain 10 questions from the chapter content and/or lecture video for the chapter. Quizzes are open book and do not require Yuja recordings. After the due date for the quiz no submissions will be accepted for credit. Quizzes will each be worth 10 points.

Exams

There will be a total of 5 exams for the course. There will be 5 unit exams during the semester. Exam 5 is NOT cumulative, but focuses students on the final chapters of the course. To provide accommodations to all students, exams will not be timed. Because of the length and depth of these exams, they will be open book and no proctor will be needed. Students will have to record themselves using Yuja during exams. You can use your book during exams, but you cannot use internet resources. **Textbook only.** You will be able to leave and re-enter exams to complete them as needed, but they need to be completed by the assigned due date. You will need to start a new Yuja video if you leave and come back to an exam. You will be expected to complete these exams individually and if it is discovered that students have provided information to one another, posted the questions (or any course content) online, or in some other manner of distributing content (social media, text/cell phone) a zero will immediately be given for the exam. Academic honesty is crucial for learning. No exam submissions will be accepted after the due date. Each exam is worth 100 points.

Animations and Video Clips

Postings of a variety of animations and video clips may be provided for different content areas. These are for your viewing pleasure and may help you in fully achieving the topic-specific learning outcomes.

Learning Experiences

- Read all chapters before attempting assignments/quizzes
- Watch video/animations provided by instructor
- Items that earn points (quizzes/outlines/exams/etc.) will be given via the detailed schedule at the end of this syllabus.

Instructional Technologies Utilized in this Course

- Blackboard Ally
- Blackboard Ultra
- Yuja
- YouTube

- Various videos/animations provided by publisher

Expectations/Protocols

As a student of BIOL 151, I expect that you:

- Fully review/read the course syllabus and go to it if you have questions before asking the instructor;
- Fully complete the assignments/quizzes/reviews for each chapter...this includes reading the chapters and watching video postings, watching lecture videos, and completing exams all by the due dates.
- Check your university email as well as check for announcements within the course shell every single day.

As the instructor of BIOL 151, you should expect of me that I:

- Clearly provide you a syllabus and course schedule that displays the deadlines for each section of content
- Create an online classroom environment that supports your understanding of content;
- Fairly grade assignments and exams

Instructor/Student Communication

Email is the primary and preferred method of contact. My email address is provided at the top of the syllabus. I check my email fairly regularly and will likely respond within 24-48 hours. Email is not checked after work hours or on weekends, so please plan accordingly and do not think I am ignoring you.

If you choose to call my office (number at the top of this document) please leave a detailed message including the course you have a question in and I will respond via email as it is the preferred method of contact and we also have a paper trail of our conversation. Phone messages are not checked during the evenings nor on weekends.

Students are REQUIRED to use their Mayville State University email address for correspondence. If you email from an outside network email address, I am not responsible for missed messages as they may be filtered out of my inbox. As an instructor I will only email you from my MSU email address or from other university platforms (ConnectND or Blackboard). You need to check your MSU email account daily as well as check announcements in the course daily as that is our main method of communication.

Method of Evaluation/Grading

Your grade will be determined on total points earned out of the total points possible in the course.

- 20 points/reviews + 5 points for quiz (for each chapter)
 - 16 Chapters = 400 points
- 10 points/activity
 - 16 chapters = 160
- 5 exams = 500 points

Course grades will be calculated out of 1060 total course points

You will earn a letter grade based on your total points earned out of the possible total points (percentage). Total point percentages will be carried out to the tenths place value and rounded to the nearest whole number for the final grade (≥ 0.5 is rounded up). Your percentage will determine your final grade

90-100% = A

80-89% = B

70-79% = C

60-69% = D

0-59% = F

Enrollment Verification

The U.S. Department of Education requires instructors of online courses to provide an activity which will validate student enrollment in this course. The only way to verify that a student has been in this course is if he or she takes an action in the LMS (Blackboard), such as completing an assignment or a taking a quiz. Logging into Blackboard is **NOT** considered attendance. The enrollment verification for this course is the syllabus quiz that you **MUST** earn 100% to open the first of the course content. If it is not completed your enrollment in this course will be at risk and you may be removed from the course.

Proctor Notification

There is no proctor needed for this course.

Late Arrivals

Students who enroll after the first date of enrollment and who miss assignments understand that these are ultimately “missed points” and that those missed points could negatively impact their grade. By continuing in the course, this is understood and accepted by the late enrolling student.

Important Student Information

Navigate to Blackboard > MaSU tab > Student Resources tab to find a document entitled, “Important Student Information,” which includes information about:

- ✓ Academic Grievance Concerns and Instructor English Proficiency
- ✓ Starfish - Student Success System
- ✓ Students with Documented Disabilities
- ✓ Academic Honesty
- ✓ Emergency Notification
- ✓ Continuity of Academic Instruction for a Pandemic or Emergency
- ✓ Family Educational Rights and Privacy Act of 1974 (FERPA)
- ✓ Diversity Statement

Course Timeline/Schedule

PRINT THIS COURSE SCHEDULE. The course will follow this outline. Times for drop boxes to close for outlines and assignments is 5pm(CST) on the dates listed below. Late work is not accepted. Exams need to be completed before 5pm (CST) on the dates listed below. Late exams will not be allowed. Please note, the chapter number may vary depending upon which edition of the textbook students use. Each chapter will take approximately 3 hours to watch lecture video and complete assignments.

Topic	Chapter	Due Date	Assignment Checklist
Enrollment Verifications		Jan. 19 th	<ul style="list-style-type: none"> <input type="radio"/> Yuja Video <input type="radio"/> Introduction <input type="radio"/> Screenshot
Genes within Populations	20	Feb 3 rd	<ul style="list-style-type: none"> <input type="radio"/> Review <input type="radio"/> Activity <input type="radio"/> Quiz
The Evidence of Evolution	21	Feb 3 rd	<ul style="list-style-type: none"> <input type="radio"/> Review <input type="radio"/> Activity <input type="radio"/> Quiz
The Origin of Species	22	Feb 3 rd	<ul style="list-style-type: none"> <input type="radio"/> Review <input type="radio"/> Activity <input type="radio"/> Quiz
Systematics, Phylogenies, Comparative Biology	23	Feb 3 rd	<ul style="list-style-type: none"> <input type="radio"/> Review <input type="radio"/> Activity <input type="radio"/> Quiz
Exam 1	20-23	Feb 3rd	<input type="radio"/> Exam
The Origin and Diversity of Life	26	Feb 24 th	<ul style="list-style-type: none"> <input type="radio"/> Review <input type="radio"/> Activity <input type="radio"/> Quiz
Viruses	27	Feb 24 th	<ul style="list-style-type: none"> <input type="radio"/> Review <input type="radio"/> Activity <input type="radio"/> Quiz
Prokaryotes	28	Feb 24 th	<ul style="list-style-type: none"> <input type="radio"/> Review

			<ul style="list-style-type: none"> ○ Activity ○ Quiz
Protists	29	Feb 24 th	<ul style="list-style-type: none"> ○ Review ○ Activity ○ Quiz
Exam 2	26-29	Feb 24th	○ Exam
Seedless Plants	30	March 22 nd	<ul style="list-style-type: none"> ○ Review ○ Activity ○ Quiz
Seed Plants	31	March 22 nd	<ul style="list-style-type: none"> ○ Review ○ Activity ○ Quiz
Fungi	32	March 22 nd	<ul style="list-style-type: none"> ○ Review ○ Activity ○ Quiz
Exam 3	30-32	March 22nd	○ Exam
Animal Diversity and the Evolution of Body Plans	33	April 12 th	<ul style="list-style-type: none"> ○ Review ○ Activity ○ Quiz
Protostomes	34	April 12 th	<ul style="list-style-type: none"> ○ Review ○ Activity ○ Quiz
Deuterostomes	35	April 12 th	<ul style="list-style-type: none"> ○ Review ○ Activity ○ Quiz
Exam 4	33-35	April 12th	○ Exam
Ecology of Individuals and Population	55	May 5 th	<ul style="list-style-type: none"> ○ Review ○ Activity ○ Quiz

Community Ecology	56	May 5 th	<input type="radio"/> Review <input type="radio"/> Activity <input type="radio"/> Quiz
Dynamics of Ecosystems	57	May 5 th	<input type="radio"/> Review <input type="radio"/> Activity <input type="radio"/> Quiz
The Biosphere and Human Impacts	58	May 5 th	<input type="radio"/> Review <input type="radio"/> Activity <input type="radio"/> Quiz
Conservation Biology	59	May 5 th	<input type="radio"/> Review <input type="radio"/> Activity <input type="radio"/> Quiz
Exam 5	55-59	May 8 th	<input type="radio"/> Exam

Teacher Education Program

The following InTASC Principles are reflected in the readings and activities related to this course:

2. The teacher uses understanding of individual differences and diverse cultures and communities to ensure inclusive learning environments that enable each learner to meet high standards.
3. The teacher works with others to create environments that support individual and collaborative learning, and that encourage positive social interaction, active engagement in learning, and self-motivation.
4. The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates learning experiences that make the discipline accessible and meaningful for learners to assure mastery of the content.
5. The teacher understands how to connect concepts and use differing perspectives to engage learners in critical thinking, creativity, and collaborative problem solving related to authentic local and global issues.
8. The teacher understands and uses a variety of instructional strategies to encourage learners to develop deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways.