

Course Syllabus: Life III – The Diversity of Life

BIOL 2114

Spring 2022

Lecture: MWF 10:00-10:50 am (Bolin 100)

Lab: F 1:00-2:50 pm; 3:30-5:20 pm

Contact Information

Instructor: Masuoka; Cook; Vogtsberger

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Course Description

Life III – The Diversity of Life is the third in a three-course sequence designed for students majoring in the natural sciences. It provides an introduction to the phyla of life on Earth. The content includes description and observation of diagnostic characters including cellular complexity, body symmetries, reproductive and nutritional strategies, anatomy, and physiology. The three modules explore phylogenetic relationships and how they are determined.

Course Objectives

1. Students will understand how structural and physiological attributes of microorganisms, plants, and animals are used in their classifications.
2. Students will classify organisms based on their structural and physiological attributes.
3. Students will use bright field microscopy to identify characteristic structures of organisms.
4. Students will understand the diversity of organisms that populate the ecosystems of Earth's biosphere.

Textbook & Instructional Materials

Life – The Science of Biology, Sadava et al. 12th ed.

Office Hours and Study Aids

The instructors' office hours are posted outside each of their offices and across the hall from the Biology office, BO 218. Study aids, in addition to required exercises, are found in the Achieve, Life III Student Resources.

Student Handbook

Academic Misconduct Policy & Procedures

Academic Dishonesty: Cheating, collusion, and plagiarism (the act of using source material of other persons, either published or unpublished, without following the accepted techniques of crediting, or the submission for-credit of work that is not the individual's to whom credit is given). Additional guidelines on procedures in these matters may be found in the Office of Student Conduct.

[Student Handbook 2020-2021](#)

Grading

Table 1: Percent values of each score category

Assignments	Percentage
Exams	60%
Laboratory	25%
Achieve Exercises	15%
Total Points	100%

Table 2: Grade Standards

Grade	Percentages
A	90 to 100%
B	80 to 89.9%
C	70 to 79.9%
D	60 to 69.9%
F	Below 60%

Achieve Exercises

You will complete two sets of exercises through the Achieve site. For each chapter covered in the course, complete the Learning Curve exercise prior to the corresponding exam. For each chapter covered in the course, complete the summative quiz. The combined scores from these exercises will make up 15% of the final grade.

Exams

Each of the three segments of the course will culminate in an exam. There will be no comprehensive final exam. Posted exam dates are fixed. Do not make doctor/dentist or other appointments on exam dates, as they will not constitute excusable absences. Cell phones, electronic dictionaries, calculators, or other electronic aids may not be used for exams. Personal effects will be placed in the front of the classroom during exams.

Extra Credit

Each instructor *may* provide an opportunity to earn extra credit. If available, the means of earning extra credit will be explained by the instructor at the beginning of the corresponding module. *Ad hoc* extra credit work for individuals will not be offered or accepted.

Late Work

Assignments with due dates must be successfully submitted by the deadlines. Successful, timely submission, following the instructions accompanying the assignments, is part of the assignment and will not be waived.

Desire-to-Learn (D2L)

Use of the MSU D2L program is a part of this course. Each student is expected to be familiar with this program as it provides a primary source of communication regarding assignments, examination materials, and general course information. You can log into [D2L](#) through the MSU Homepage. If you experience difficulties, please contact the technicians listed for the program or contact your instructor.

Attendance

From the 2020-2021 Student Handbook (p. 61): Students are expected to attend all meetings of the classes in which they are enrolled. Although in general students are graded on intellectual effort and performance rather than attendance, absences may lower the student's grade where class attendance and class participation are deemed essential by the faculty member. In those classes where attendance is considered as part of the grade, the instructor should so inform students of the specifics in writing at the beginning of the semester in a syllabus or separate attendance policy statement. An instructor who has an attendance policy must keep records on a daily basis. The instructor must give the student a verbal or written warning prior to being dropped from the class. Instructor's records will stand as evidence of absences. A student with excessive absences may be dropped from a course by the instructor. Any individual faculty member or college has the authority to establish an attendance policy, providing the policy is in accordance with the General University Policies.

Instructor Class Policies

Out of courtesy to classmates and the instructor, please observe the following guidelines:

- 1) Don't walk through the front of the classroom after class has begun or before class has ended.
- 2) Don't carry on conversations during lectures, videos, examinations or other official class activities.
- 3) At the beginning of each class period, turn off cell phones (smart or otherwise), pagers and other electronic devices that may make noise, disrupt or distract.

Services for Students with Disabilities

In accordance with Section 504 of the Federal Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990, Midwestern State University endeavors to make reasonable accommodations to ensure equal opportunity for qualified persons with disabilities to participate in all educational, social, and recreational programs and activities. After notification of acceptance, students requiring accommodations should make application for such assistance through Disability Support Services, located in the Clark Student Center, Room 168, (940) 397-4140. Current documentation of a disability will be required in order to provide appropriate services, and each request will be individually reviewed. For more details, please go to [Disability Support Services](#).

University Policies

Campus Carry Rules/Policies

Refer to: [Campus Carry Rules and Policies](#)

Smoking/Tobacco Policy

University policy strictly prohibits the use of tobacco products in any building owned or operated by WATC. Adult students may smoke only in the outside designated-smoking areas at each location.

Alcohol and Drug Policy

To comply with the Drug Free Schools and Communities Act of 1989 and subsequent amendments, students and employees of Midwestern State University are informed that strictly enforced policies are in place which prohibit the unlawful possession, use or distribution of any illicit drugs, including alcohol, on university property or as part of any university-sponsored activity. Students and employees are also subject to all applicable legal sanctions under local, state and federal law for any offenses involving illicit drugs on University property or at University-sponsored activities.

Grade Appeal Process

To appeal a grade, consult the Midwestern State University [Undergraduate Catalog](#)

Lecture Schedule

The order of subjects, below, will be followed, but exact dates may shift as the term develops. Exam dates are fixed and will be observed

Date	Topic	Chapter(s)
Jan 10	Introduction; Taxonomy	(20)
Jan 12	Taxonomy	(20)
Jan 14	Fungi	28
Jan 17	<i>No Class: MLK Jr. Day</i>	
Jan 19	Fungi	28
Jan 21	Fungi	28
Jan 24	Protists	25
Jan 26	Protists	25
Jan 28	Protists / Bacteria	25, 24
Jan 31	Bacteria	24
Feb 2	Bacteria / Archaea	24
Feb 4	Archaea	24
Feb 7	Archaea / Viruses	24+
Feb 9	Viruses	24+
Feb 11	Viruses	24+
Feb 14	<u>Examination #1</u>	
Feb 16	Phylogenetic Classification (Pptx 1)	26
Feb 18	Plant Characters (Pptx 1)	26, 27
Feb 21	Origin of the Plant Clade (Pptx 2)	26
Feb 23	The Move to Land (Pptx 3)	26
Feb 25	Life Cycle, Sexual and Asexual Reproduction (Pptx 3)	26
Feb 28	Reaching for the Sun (Pptx 4)	26
Mar 2	Branching Out (Pptx 4)	26
Mar 4	Wood (Pptx 5)	27
Mar 7	Seeds, and Pollen (Pptx 5)	27
Mar 9	"Gymnosperm" Phylogenies (Pptx 5)	27
Mar 11	Flowering Plants: A Complete Upgrade? (Pptx 6)	27
Mar 14	<i>No Class: Spring Break</i>	
Mar 16	<i>No Class: Spring Break</i>	
Mar 18	<i>No Class: Spring Break</i>	
Mar 21	Basal Flowering Plant Clades (Pptx 6)	27
Mar 23	Derived Flowering Plant Clades (Pptx 6)	27
Mar 25	<u>Examination #2</u>	
Mar 28	Definition, Origins, and Architecture of Animals	29

Mar 30	Feeding Strategies, Life Cycles, and Stages of Animals; Non-Bilaterian Animals: Ctenophores	29
Apr 1	Non-Bilaterian Animals: Ctenophores, Sponges, Cnidarians	29
Apr 4	Non-Bilaterian Animals: Cnidarians	
	Protostome Animals: Platyhelminthes	29, 30
Apr 6	Protostome Animals: Platyhelminthes, Molluscs	30
Apr 8	Protostome Animals: Molluscs	30
Apr 11	Protostome Animals: Annelids, Nematodes	30
Apr 13	Protostome Animals: Nematodes, Arthropods	30
Apr 15	<i>No Class: Holiday Break</i>	
Apr 18	Protostome Animals: Arthropods	30
Apr 20	Protostome Animals: Arthropods; Deuterostome Animals: Echinoderms	30, 31
Apr 22	Deuterostome Animals: Echinoderms, Invertebrate Chordates	31
Apr 25	Deuterostome Animals: Vertebrate Chordates/Fishes	31
Apr 27	Deuterostome Animals: Vertebrate Chordates/Amphibians, Reptiles	31
Apr 29	Deuterostome Animals: Vertebrate Chordates/Mammals	31
May 4	<u>Examination #3</u> Wednesday 10:30 am - 12:30 pm	

Laboratory Schedule

Life III – The Diversity of Life is a laboratory course. Enrollment and participation in the laboratory section of the course are necessary for you to experience forms of life first hand. They're also required. If you miss a laboratory session for any reason, it is your responsibility to contact your lab instructor and make arrangements to complete assignments from that laboratory when that is possible. If you miss three or more laboratory meetings for any reason you may be dropped from the course with a grade of F. So, save up those two permitted absences for unexpected, unavoidable situations.

COVID-19 Modifications:

Class size, including lab sections, may be adjusted to maintain physical distancing required to mitigate SARS-CoV-2 transmission. Instructors will provide instruction as to how the lab sections will be re-organized if these modifications are to be implemented. This information will be posted in D2L. Therefore, it is imperative that you continually check the D2L page for course updates.

Date	Lab #	Exercise
January 14	1	Laboratory Safety, Microscope use and care, Microbial ubiquity
January 21	2	Fungi
January 28	3	Protists
February 4	4	Bacteria
February 11	5	Plant Characters
February 18	6	Seedless Plants
February 25	7	Seed-bearing Plants
March 4	8	Flowering Plant Morphology
March 11	9	Monocot-Eudicot Survey
March 18		<i>No Lab: Spring Break</i>
March 25	10	Sponges, cnidarians, flatworms
April 1	11	Molluscs, segmented worms
April 8	12	Roundworms, arthropods
April 15		<i>No Lab: Holiday Break</i>
April 22	13	Echinoderms, chordates
April 29	14	Animal Lab Practical