



MIDWESTERN STATE UNIVERSITY

Course Syllabus: **Seminar in Biology**

College of Science and Mathematics

BIOL 4001 Section 201

Spring 2026

Contact Information

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Course Description

Recent advances in the biological sciences. This is the capstone course for biology majors. The purpose of this seminar class is to: 1. Provide students with an opportunity to express themselves orally by preparing and presenting a seminar presentation such as would be expected at professional meetings and conventions. Seminar should help the student prepare to communicate with an audience of peers both formally and informally. 2. Provide a forum for discussion and evaluation of peer-reviewed research journal publications on current topics. 3. Examine basic concepts and current topics in biology. 4. Assess competency of biology graduating seniors in the use of microscopes. 5. Assess ability of biology graduating seniors to generate, understand, and correctly interpret data that are presented in tabular and graphical formats. 6. Assess ability of biology graduating seniors to critically and effectively read and evaluate professional literature. 7. Take the comprehensive Major Field Test in Biology.

Textbook & Instructional Materials

The recommended lecture texts are: 1. Writing Papers in the Biological Sciences, 3rd ed. by Victoria E. McMillan, 2001. ISBN 0-312-25857-7. 2. Reading Primary Literature: A Practical Guide to Evaluating Research Articles in Biology by Christopher M. Gillen, 2007. ISBN 0-8053-4599-X.

Student Handbook

Refer to: [Student Handbook 2025-26](#)

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Dishonesty: Cheating, collusion, and plagiarism (the act of using source material of other persons, either published or unpublished, without following the accepted techniques of crediting, or the submission for credit of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 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 2025-26](#)

Grading

Table 1: Points for calculation of oral presentation portion of the overall grade for Seminar.

Assignments	Points
Oral presentation	150
Attendance and peer evaluations	30
Reprint distribution	20
Total points	200

Table 2: Percentage for each component of the overall course grade.

Course components	Percentage
Oral presentation (including attendance and reprints)	60
Microscope proficiency exam	10
Graphs/Tables proficiency exam	10
Written exercise on reading and evaluating literature	10
Major Field Test in Biology	10
Total overall course grade	100

Table 3: Total percentage for final grade.

Grade	Percentage
A	90 to 100
B	80 to 89
C	70 to 79
D	60 to 69
F	Less than 60

Graded Components of Course (Exams, Exercises, Activities)

Students enrolled in seminar will be expected to: 1. Take two proficiency exams: one that evaluates your ability to generate, understand, and correctly interpret data that are presented in tabular and graphical formats and another exam that evaluates your competency and use of microscopes. 2. Choose a peer-reviewed

primary journal article published within the last TWO years involving research on some aspect of biology and get the article approved by the instructor for use in your presentation. After approval of article/topic, decide on an appropriate title for your seminar presentation and prepare flyers to be posted in the halls of Bolin Science Hall to announce your presentation. Your flyer should also be pre-approved by the instructor prior to when it is due. **Five copies** of your instructor-approved flyer should be submitted to your instructor **ONE WEEK BEFORE your presentation**. **Presentation title should not be exactly the same as the article used as basis for your presentation**. 3. Provide a reprint of the journal article to everyone in seminar **ONE WEEK IN ADVANCE** of your presentation day. Each student should then **read the presenter's article prior to the actual presentation** and **come with questions** about the article or topic to ask the presenter during the question and discussion period after the presentation has been made. 4. Present a **15-minute** presentation on the article and topic it concerns using Powerpoint or other appropriate presentation format. The presentation should address the following lettered items (Some possible questions to consider are also listed below each): A. Background on the topic of the research article. 1. Why is it important? 2. Any prior or related work reported on the topic? B. Hypothesis/Problem addressed in the research article. 1. Why was the research performed in the first place? 2. What was trying to be answered? C. Methods and Procedures used. 1. How was the research carried out and conducted? D. Results. 1. Was the hypothesis/problem studied and answered? 2. Were there any unexpected results/problems? E. Conclusions. 1. Were appropriate conclusions drawn? F. Critique of the work. 1. Were methods appropriate for the study? 2. Was interpretation of any of the data incorrect? 3. Is there anything you suggest have been done differently? 4. What other work would you suggest be done? After you complete your presentation, you will be expected to answer questions concerning your topic from those in attendance. Your presentation should be one that **YOU** have prepared **specifically for this class** and should not be one that was used in any of your previous classes. In other words, **DON'T** recycle presentations.....prepared by you, or by anyone else! **Be forewarned**, if it has been determined that you have recycled a presentation for seminar or that you have committed academic dishonesty, this will be grounds for an automatic "F" to be assigned as your grade for the course. Academic dishonesty on exams may result in a grade of zero. Students should refer to the current MSU Handbook and Activities Calendar for university policy on academic dishonesty, student rights and activities. See page 4 for the student honor creed. 5. You will be required to complete a written exercise that will assess your ability to critically and effectively read and evaluate professional literature (see separate handout concerning the exercise). This exercise will be completed and turned in to your instructor **ONE WEEK BEFORE your presentation** along with the reprint of the article you have chosen to use as the basis for your oral presentation. 6. Each student will evaluate all of your fellow classmates' seminar presentations. Therefore, **attendance at ALL seminar presentations is MANDATORY**. Points will be deducted from your final grade for any days missed. We only meet one day a week for an hour, so I expect all

of you to always be here for class. See page 27 of the MSU Handbook and Activities Calendar for information on class attendance policy. The student presentations will be scheduled during the first week of classes. We will have either one or two presentations per class meeting (depending on number of students enrolled) with the first presentation being given starting in the **seventh** week of classes. My advice is to start working on your presentations right away in case you have any problems arise with getting your presentation together (i.e. computer problems, interlibrary loan orders, etc.)....DON'T PROCRASTINATE!! [Grading, concerning presentations: Oral presentation (150 points), Attendance & peer evaluations (30 points), Reprint distribution (20 points)=200 total points.] You should be able to find all of the resources you will need from libraries and the Internet. Be warned, you may have to get the library to order a specific article for you through Interlibrary Loan since many of the biological journals may not be held in our library or we may not have full text access to online versions. Therefore once again, DO NOT PROCRASTINATE in locating the journal research article that you are going to use for seminar!!! Many of the journals dealing with biology may be available online without requiring a subscription. You may be able to find sites on the Internet with images that you might want to use in your presentation, if appropriate. To find sources on the Internet, just use several of the different search engines (e.g. Google Scholar) and search for key words dealing with your topic. You should get numerous sources returned to you. Many sites may also contain links to other areas concerning the biological subject of your interest. You may also want to check "Biosis", "Medline", or "Zoological Record" which are sources of abstracts for peer-reviewed journal articles. Getting on the Internet and **searching for information** pertaining to your biological subject of interest is part of your job for seminar. Being able to successfully search and retrieve information from the Internet on **any** subject is a very important skill to possess. You should be familiar with all the "ins and outs" of searching the Internet and following links for a particular subject. When you have your Powerpoint (or other format) presentation completed, always make sure that you have given it a "trial run" with the computer/projection set-up in our classroom where you will be giving your actual presentation. You should **practice the delivery** of your presentation many times over to ensure that you have it "fine-tuned" for the time you present it to the class. 7. We will have a single Saturday morning meeting on **March 21 at 9:00 A.M.** in which each student will take the comprehensive Major Field Test (MFT) in Biology. This separate date/time is necessary due to the length of this standardized exam being 2 hours. **YOUR ATTENDANCE ON THIS DATE TO TAKE THE EXAM IS MANDATORY!** Your **performance** on the MFT exam will count 10% of your grade for seminar. Your grade will be based on a 180 point scale. This is taken from the fact that your total test score from the ETS Major Field Test will range anywhere from 120-200. Take pride in yourself and take it seriously! Prepare for it thoroughly and try to do your best on it.

Extra Credit

Extra credit assignments are not available in this course.

Make Up Tests

Make-up exams will be administered ONLY FOR EXTENUATING CIRCUMSTANCES OR UNIVERSITY-AUTHORIZED ABSENCES. You **MUST** present a valid university excuse to me and/or make arrangements with me **BEFORE** the exam is missed in order to be able to make up a missed lecture exam. If a make-up exam is granted, it should be taken immediately.

Important Dates

Last day for term schedule changes: January 23, 2026.

Deadline to file for graduation: February 16, 2026.

Last Day to drop with a grade of "W": April 29, 2026.

Refer to: [Drops, Withdrawals & Void](#)

Attendance

Each student will evaluate all of your fellow classmates' seminar presentations.

Therefore, **attendance at ALL seminar presentations is MANDATORY**.

Points will be deducted from your final grade for any days missed. We only meet one day a week for an hour, so I expect all of you to always be here for class.

See page 27 of the MSU Handbook and Activities Calendar for information on class attendance policy. We will have a single Saturday morning meeting on

March 21 at 9:00 A.M. in which each student will take the comprehensive Major Field Test (MFT) in Biology. This separate date/time is necessary due to the length of this standardized exam being 2 hours. **YOUR ATTENDANCE ON THIS DATE TO TAKE THE EXAM IS MANDATORY!**

Class Policies

Class Prerequisite: Restricted to senior biology or general science majors.

Class Requirements: This class is to be taken by biology/science majors that are in their final semester before graduating (or December graduates of the current year).

**ALL PHONES SHOULD BE OFF AND PUT AWAY IN THE CLASSROOM.
ABSOLUTELY NO TEXTING ALLOWED DURING CLASS!**

Change of Schedule

A student dropping a course (but not withdrawing from the University) within the first 12 class days of a regular semester or the first four class days of a summer semester is eligible for a 100% refund of applicable tuition and fees. Dates are published in the Schedule of Classes each semester.

Refund and Repayment Policy

A student who withdraws or is administratively withdrawn from Midwestern State University (MSU) may be eligible to receive a refund for all or a portion of the

tuition, fees and room/board charges that were paid to MSU for the semester. HOWEVER, if the student received financial aid (federal/state/institutional grants, loans and/or scholarships), all or a portion of the refund may be returned to the financial aid programs. As described below, two formulas (federal and state) exists in determining the amount of the refund. (Examples of each refund calculation will be made available upon request).

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](#).

College Policies

Campus Carry Rules/Policies

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

Smoking/Tobacco Policy

College 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 are informed that strictly enforced policies are in place which prohibits 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

Students who wish to appeal a grade should consult the Midwestern State University [Undergraduate Catalog](#)

Notice

Changes in the course syllabus, procedure, assignments, and schedule may be made at the discretion of the instructor.

Course Schedule

Week or Date	Topics/Exams
Week 1 1/19	MLK Holiday
Week 2 1/26	Introduction; Syllabus; Order Determination
Week 3 2/2	Library Searching; Aspects of Oral Presentation; Literature Evaluation Report
Week 4 2/9	Peer Evaluation Sheets; Major Field Test Information; Microscope Practice in Lab
Week 5 2/16	Microscope Proficiency Exams
Week 6 2/23	Tables/Graphs Proficiency Exams
Week 7 3/2	Student Presentations
Week 8 3/9	SPRING BREAK
Week 9 3/16	Student Presentations
Week 10 3/23	Student Presentations
Week 11 3/30	Student Presentations
Week 12 4/6	Student Presentations
Week 13 4/13	Student Presentations
Week 14 4/20	Student Presentations
Week 15 4/27	Student Presentations
Week 16 5/4	Exit Questionnaire; Return of Evaluation Packets