

BIOL 4001-203 Seminar in Biology
Spring 2022
Wednesday 12:00-12:50 A.M. BO 209
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Text: 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.

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.

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. If situations change concerning COVID-19 restrictions sometime during the semester, communication for class will be converted to using D2L and instructions will be given at that time as to how we will proceed with our class.

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 scores	150 points
Attendance & peer evaluations	30 points
Reprint distribution	<u>20 points</u>
	200 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 **February 26 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.

Overall Course Grading:	Oral presentation (including attendance and reprints)	60%
	Microscope proficiency exam	10%
	Graphs/Tables proficiency exam	10%
	Written exercise on reading & evaluating literature	10%
	<u>Major Field Test in Biology</u>	<u>10%</u>
	Total course grade for BIOL 4001	100%

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