

Supplemental Material

CBE—Life Sciences Education

Camfield *et al.*

Hello [Student],

It appears that you were not as successful at our exam 1 as you could have been. You are showing up to class and participating, you are being amazing and working hard. Unfortunately, sometimes, we are missing some simple strategies that could make studying easier, faster, and better. This is a difficult class, but you can do this and be successful.

Would you be willing to meet with me to talk about things that you can try that may help you keep moving forward and graduate?

I look forward to hearing from you,
Dr. Schiller

Please take a moment to reflect on, and answer the following questions. Please put your name on the top and hand this document in with your exam. This will **not** be graded. If you do not hand in this document, your exam score will **not** be released back to you until you complete this reflection.

1. Approximately how much time did you spend preparing for this exam? _____
2. What percentage of your test-preparation was spent in each of these activities?
 - a. Reading textbook section(s) for the first time _____
 - b. Rereading textbook section(s) _____
 - c. Reviewing quiz questions _____
 - d. Solving problems for practice _____
 - e. Reviewing your own notes _____
 - f. Reviewing YouTube videos _____
 - g. Using new learning strategies _____
 - h. Other _____

(Please specify) _____

3. Based on your responses to the questions above, how prepared do you feel to take and be successful on this exam?

not at all prepared, somewhat prepared, adequately prepared, or Highly prepared

4. Based on your responses to the questions above, what grade do you think you will make on this solo take of the exam?
5. From 0-100%, how confident are you that you will make this grade?

1. Approximately how much time did you spend preparing for this exam? _____
2. What percentage of your test-preparation was spent in each of these activities?
 - a. Reading textbook section(s) for the first time _____
 - b. Rereading textbook section(s) _____
 - c. Reviewing homework _____
 - d. Solving problems for practice _____
 - e. Reviewing your own notes _____
 - f. Reviewing YouTube videos from course website _____
 - g. Other _____

(Please specify) _____

3. Now that you have looked over the exam with your team, estimate the percentage of points you lost due to each of the following.
 - a. Lack of understanding of the concept _____
 - b. Not knowing how to approach the question _____
 - c. Not understanding the words in the question _____
 - d. Careless mistakes _____
 - e. Other _____

(Please specify) _____

4. Based on your responses to the questions above, name at least three things you plan to do differently in preparing for the next exam. For instance, will you spend more time studying, change a specific study habit, or try a new one (if so, name it), make math more automatic so it does not get in the way of physics, try to sharpen some other skill (if so, name it), solve more practice problems, or something else?

5. What can we do to help support your learning and your preparation for the next exam?

Pre-course Survey

Name _____

Because I am committed to optimizing your success' in this course, it is important to me to understand what you are feeling/thinking about this class from day one. Therefore, please respond to the following prompt with enough detail so as to help me design effective lessons for our future classes.

Please describe your strengths and weakness as a biology student, using examples from your past experiences in science classes (or elsewhere) to support your self-perception.

Mid-course Survey

Name _____

Because I am committed to optimizing your success' in this course, it is important to me to understand what you are feeling/thinking about this class at **mid-point of the semester**. Therefore, please respond to the following prompt with enough detail so as to help me design effective lessons for our future Biology courses.

Please describe your strengths and weakness as a biology student, using examples from your past experiences in science classes (or elsewhere) to support your self-perception.

Mid-course SE Survey (ERI)

Name _____

Because I am committed to optimizing the Biology 150 at Wingate University, it is important to me to understand how you are feeling/thinking about this class at the **mid-point of the semester GIVEN THE UPCOMING CHANGES TO OUR TEACHING AND LEARNING FORMAT**. Therefore, please respond to the following prompt with enough detail and information so as to help me design effective lessons for our future Biology courses.

Please describe your strengths and weakness as a biology student using examples from your past experiences in science classes (or elsewhere) to support your self-perception at the mid-point in the semester GIVEN THE UPCOMING CHANGES TO OUR TEACHING AND LEARNING FORMAT. Thanks.

Post-course Survey

Name _____

Because I am committed to optimizing the Biology 150 course at WU, it is important to me to understand how you are feeling/thinking about this class at the end of the semester.

Therefore, please respond to the following prompt with enough detail and information so as to help me design effective lessons for our future Biology 150 courses.

Please describe your strengths and weakness as a biology student using examples from your past experiences in science classes (or elsewhere to support your self-perception. Thanks.

Biology Self-Efficacy Scoring Rubric

Evidence of Efficacy: The student is able to identify elements of being a successful biology student AND *demonstrates belief in his/her ability to use these elements successfully*. If the student identifies problems or learning challenges, he/she offers possible solutions to these problems. The student may demonstrate awareness of learning as a process (or of “growth mindset”) and is able to prioritize specific future tasks. The student may comment on effective management of time to effectively fulfill an assignment.

-1	0	1	2	3
negative evidence	lack of evidence	very weak evidence	moderate evidence	strong evidence

Evidence of Mastery Experiences: The student describes having had successful experiences in past science classes at some point in the process (i.e. student does not have to have “mastered” the entire subject to have had mastery experiences).

-1	0	1	2	3
negative evidence	lack of evidence	very weak evidence	moderate evidence	strong evidence

Evidence of Use of Positive Modeling: The student refers to course materials and/or key figures as aspirational models used when approaching her/his own work. The student might also talk about the utility of peer and/or instructor feedback. The student might refer to his/her own successful work as models as well.

-1	0	1	2	3
negative evidence	lack of evidence	very weak evidence	moderate evidence	strong evidence

Evidence of Low Anxiety and/or High Positive Affect: The student uses positive or affirming adjectives to describe her/himself as a biology/science student. Student may even express confidence and/or enjoyment of the subject. Problems are accurately attributed but seen as specific and manageable (e.g. “I need to work on time management.”), as opposed to global and catastrophic (e.g. “I am stupid.”).

-1	0	1	2	3
negative evidence	lack of evidence	very weak evidence	moderate evidence	strong evidence

Evidence of Empowerment or Positive Social Agency: The student takes responsibility for his/her own outcomes, as opposed to blaming other factors for poor results. The student may express willingness to “keep trying” and attributes success to improved understanding of the subject rather than luck or external forces. The student may express “ownership” of the subject or of his/her learning. The student may describe proactively seeking help from others (e.g., forming a study group) and/or actively utilizing available support systems (e.g., tutoring center and/or office hours).

-1	0	1	2	3
negative evidence	lack of evidence	very weak evidence	moderate evidence	strong evidence

Student ID or Name:

Score _____/15

Purpose: This document outlines the augmented course design of our Bio150 course. The purpose of this document is to provide you with transparent details, where possible, on how to access the course content, exams, and online discussions. The details in this document will also include information regarding how to maintain open communication with me for the remainder of the course. This will which will enable you to remain successful.

Student Office hours: I have set up a community discord server for our class. The link to this server is: <https://discord.gg/spWni2m> You can access this server in three ways: the free web browser, the free Discord desktop App, the free Discord Mobile App.

I will hold virtual student office hours, via **LIVE** chat, on this server **Monday -Friday** between the hours of **8am-7pm**. Just type **@Dr. Schiller** to notify my computer and my phone to get my attention, *I typically respond within 5 mins.*

Virtual **Voice** student office hours dedicated to you will be every **Tuesday** and **Thursday 12pm-1:30pm** or by *appointment*.

Email: Since we are all being inundated with horrible amounts of email; this may be a more difficult method to get a hold of me. I will be checking email daily, however the amount of email I need to respond to will delay my response to you. The fastest way to get a response is through discord, *you can expect a response within 48 hrs.*

Course Content

Lectures: I will be posting 4 short PowerPoint lectures with voice over and video drawings on Canvas (under the Modules section) each week. These lectures will be each linked to a graded team discussion board. Embedded *randomly* within some lectures will be a question that you and your team must answer on the discussion board by **11:59pm the next Sunday**. **5 of these grades will be randomly dropped at the end of the semester. These will replace the randomly graded in class team assessments.**

Exams: Remaining Exams will be posted under the Quiz section of Canvas. The exam will be posted and available for 7 days. You may access the exam only **once**, at any time, within that one week. You will have **90 mins** to complete the Exam once you have accessed the file. The exam will require a course code, which will be given out when the exam opens. *This exam format replaces the existing format in the original syllabus.*

Lastly, to help keep you on task, I will notify you weekly, every Monday on Discord, and Canvas to remind you of what is due for Bio 150 that week.