EXCELLENCE IN TEACHING AWARD

ANDREW WIGGINS

Department of Microbiology
Franklin College of Arts and Sciences
UNIVERSITY OF GEORGIA

Ph.D. CANDIDATE

University of Georgia • 537 Biological Sciences • Athens, Georgia 30602
Phone: (770) 301-4328 • E-mail: agw24034@uga.edu

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UNIVERSITY OF GEORGIA

Jennifer R. Walker, PhD
Lecturer and Undergraduate Coordinator
Biological Sciences Building
120 Cedar St
Athens, Georgia 30602
TEL 706-542-0947 | FAX 706-542-2674
www.mib.uga.edu

Franklin College of Arts & Sciences
Microbiology

January 21, 2021

To: Committee for Excellence in Teaching

Dear Colleagues,
It is with pleasure that I nominate Andrew Wiggins for the Graduate School's Excellence in Teaching Award. Andrew demonstrates a solid work ethic, establishes good rapport with students, and continues to add effective pedagogical practices to the classroom. During his graduate career, Andrew participated in several workshops, programs, and volunteer opportunities to develop and refine his teaching practices. I was able to observe his interest and activities in teaching first as his GRSC instructor and later as a teaching mentor. With every conversation and activity, I watched Andrew cultivate his teaching passion. In light of his experiences as a teaching assistant and instructor of record, his pursuit to identify effective assessment as well as engage in science education with the community, I believe Andrew is well deserving of this award.

Andrew has served as a TA over three years and more recently as instructor of record, demonstrating his leadership among graduate students. He carried out TA responsibilities for a variety of our microbiology introductory labs. During his time as a lab TA, Andrew also sought out more experiences in the classroom. He volunteered to guest lecture a variety of topics in MIBO 2500 and MIBO 3500. With his growing leadership and teaching interests, Andrew was selected as Instructor of Record for MIBO 2500 Spring of 2019 and Spring 2020 under my mentorship. To note, the Microbiology Department carefully selects graduates students on occasion to teach an extra section of MIBO 2500 based on their established commitment to excellence in the teaching labs. As Instructor of Record, Andrew put into practice much of what he had learned through workshops and GRSC courses. In particular, Andrew began to implement the in-class assessment tool of Kahoot, a free online quiz feature for students. The Kahoot tool became a scholarly pursuit as Andrew went a step further to carefully identify correlations between students' performance on the assessment and exam scores. He plans to present his findings at the upcoming Lily Conference this summer.

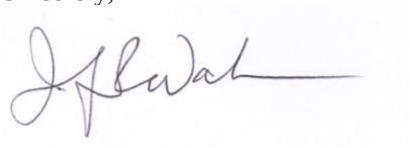
I personally observed and evaluated Andrew's interactions in the classroom. He shows genuine interest in helping students and desires to make course content clear and engaging. During his time as a TA and instructor of record, Andrew's efforts were marked by enthusiasm and extra effort to benefit students. As instructor of record, he easily engaged with students by knowing them each by name and regularly scheduling office hours to answer their questions. He became comfortable with the use of a SCALE-UP room where students sit in round tables to increase peer-to-peer interaction. He also implemented a number of POGIL (process oriented guided inquiry learning) based group activities in his class to take advantage of the room arrangement and to enhance student discussion. Additionally, Andrew assisted with our Microbiology Peer Assistant program by recruiting undergraduates and guiding them to assist peers during POGIL exercises.

What was most impressive about Andrew's teaching practices and efforts here at UGA was his handling of the Spring semester in 2020 while teaching MIBO 2500 as Instructor of Record. When classes were shut down for two weeks and all instructors were given notice to switch their courses to completely online, Andrew took this transition in stride. He quickly adapted and implemented online synchronous and asynchronous lectures. He identified creative uses of Zoom to engage students. Shifting all his assessments online was done with accessibility at the forefront. Overall, Andrew created a smooth transition to the online classroom while still maintaining content rigor, implementation of POGIL activities, use of peer learning assistants, and consistent communication with his students. His students provided strong and positive feedback at the end of the reflecting his enormous efforts to assist students in the transitional semester.

In addition to these past activities, Andrew has been involved in other campus and community events. Early teaching experiences has led Andrew to apply and gain admission to UGA's Future Faculty Fellows program where he continued to refine his pedagogical practices as well as prepare for a career that involves teaching. He also sat on the Campus Sustainability Grants Committee and has mentored FFA students at a local middle school to oversee Agri-science Fair projects.

Overall, Andrew shows great interest and enthusiasm for teaching as well as effective pedagogical practices which are reflective in his positive student feedback. In light of all these qualities and contributions, I highly recommend Andrew for the Excellence in Teaching Award.

Sincerely,



Jennifer R. Walker, PhD

Andrew Wiggins' Excellence in Teaching Award Statement

My path into the doctoral program at the University of Georgia was unconventional and has led me in many directions. As graduation appears on the horizon, these paths have converged into a singular direction as a career in higher education. To satisfy requirements for my Ph.D. degree in Microbiology, I served as a teaching assistant (TA) in the Introductory Microbiology Laboratory course (MIBO 3510L) during fall 2017. As I interacted with students, it became very clear that teaching would become a heartfelt endeavor. After the second semester as a teaching assistant, I began to explore ways to develop skills that would eventually allow me the role of instructor for my own course. I had found a guiding star throughout graduate school.

Dr. Jennifer Walker, was instrumental in developing my teaching skills. She invited me to mentor students at Malcom Bridge Middle School by assisting them in creating their Future Farmers of America Agri-Science Fair projects. The mentoring opportunity was very rewarding and confirmed that a career in higher education was what I wanted to pursue. Dr. Walker later invited me to be a guest lecturer in the Introductory Microbiology and Healthcare course (MIBO 2500). To develop my teaching skills further, I enrolled in Dr. Zoe Morris' Course Design (GRSC 7900) course, which focused on pedagogical theory and provided me with a solid foundation to develop my teaching philosophy. The course introduced me to evidence-based teaching methodologies, such as how to generate meaningful learning using the Select-Organize-Integrate (SOI) model, the value of active learning, and applications in gamification. At the same time, I began participating in workshops hosted by the Center for Teaching and Learning (CTL) to hone my teaching skills and network with peers outside of the Microbiology Department who were interested in teaching. My experiences have led for me to submit a poster proposal for a Lily Conference Series in Austin, Texas this summer to share my Kahoot (gamification) data derived from the courses I taught as instructor of record. I also plan to submit a round-table discussion at Lily-Austin about my method in using Learning to Draw and Summarize and its implementation as a writing intensive element for my course. In addition, I completed 9-credit hours in course work related to teaching development to satisfy the requirements for the Interdisciplinary Certificate in University Teaching offered by the Graduate School.

The Future Faculty Fellows Program (3FP) was another experience for me. The fellowship provided more opportunities to reflect on teaching ideas and gain insight into a career in academia and provided opportunities to serve at the CTL. I cohosted a TA Café and assisted in formative evaluations during the fall semester. During the spring semester, I assisted with UGA's TA orientation and Spring Teaching Symposium (STS). For the STS, I created a breakout session for *Efficient grading,* present a workshop using the SOI model from my course, and helped select applicants for the next cohort of 3FP. In addition, I've mentored numerus undergraduate students as peer learning assistants, been an invited guest speaker for various events at CTL, and participated in selecting proposals for the Campus Sustainability Grants. For the current semester, I was awarded the TA ship for Dr. Walker's Graduate Teaching Seminar (GRSC 7770) course.

I am confident that the pedagogical ★ leading me on my journey has prepared me to be competitive in today's market, and has equipped me to be a beneficial faculty member for my future university. I could not have accomplished this without such an amazing group of mentors, 3FP cohort, and friends in the department.

UNIVERSITY OF GEORGIA

TEACHING PORTFOLIO

ANDREW WIGGINS
DEPARTMENT OF MICROBIOLOGY
UNIVERSITY OF GEORGIA

Teaching Philosophy Statement

My initial curiosity about biology began in childhood as I explored the neighborhoods, parks, streams, and farms around my hometown of Carrollton, GA. My curiosity led to conducting research in genetics for a microbiology laboratory in my undergraduate years participating as a research and teaching assistant in Dr. Mark Liles laboratory at Auburn University. In the Liles' Lab, I conducted research and engaged with graduate students and professors on a personal level.

My undergraduate mentors trained in me values that I still use at the University of Georgia as a Ph.D. candidate. I have a supportive research professor, Dr. Anne Summers, who fosters my professional development in research and instruction. The department has assigned me instructor of record for Microbiology and Healthcare course twice. The enrollment for my course has never exceeded 45 students and allows me to know them on a personal level. I always survey my students before the first class on their background and career goals to regularly incorporate real-world examples when delivering new material for them to incorporate into their prior knowledge. I also design in-class activates that afford opportunities to interact with students in small groups thereby encouraging their social development in a science cores and emphasizing my accessibility as a mentor.

My growth in pedagogy has taught me the value of active learning strategies that can be combined to enhance learning in the Select-Organize-Integrate (SOI) teaching model, such as learning by mapping, learning by drawing, and learning by summarizing. Other effective teaching strategies I employ include think-pair-share, gamification using Kahoot, and student group videos or skits designed to teach students about a common clinical pathogen and the disease it causes. I've also learned to turn lecture time towards having students discuss textbook content or videos applying the information to real-world scenarios. I encouraged them to share their insights by drawing a process or mechanism on the white board and to relate information to their prior knowledge from other courses as they draw and discuss their chosen topic. At midsemester, I used a brief survey to see whether they feel the activities helped them understand the material. The greater majority of students found it easy to ask questions in class and active learning practices helped them grasp new content.

The greatest impact on my professional growth has come from my mentors in undergraduate and graduate school. These scholars have built my self-confidence, been role models for leadership, and encouraged my own self-discovery and abilities to find solution to real-world problems. They inspired me to pass such skills on to my own students, specifically, the undergraduate peer learning assistants who helped on group case study days. Peer assistants attend a pre-activity meeting, then in class they helped explain the activity, provided feedback during the activity, and suggested ways to improve the activity. During my two terms as instructor-of-record, I mentored 16 peer assistants and invited 7 of them to serve in the next cohort. One of my students participated multiple times and several credited the experience with acceptance into their dream post-graduate school or future employment.

Being able to create an environment where students can enjoy and appreciate the wonders of microbiology, display their creativity, and give back to the departments that foster my own understanding and practice of teaching is a dream come true. As I see myself transitioning from mentee to mentor, I reflect back when Dr. Liles was talking to me as I sat in his chair in the laboratory chuckling, "don't worry, this world has a funny way of working out. You'll have your own captain's chair one day." And I just thought to myself, "not if you've seen my transcript." But with stead faith and guidance from my mentors I joyfully present to you my philosophy of teaching as the dream transitions into reality.

"Faith: It's all about believing, you don't know how it will happen, but you know it will." ~ unknown

Description of Courses Taught
University of Georgia
Franklin College of Arts and Science, Department of Microbiology

Instructor of Record

Microbiology and Healthcare (4cr; MIBO 2500) **Spring 2020**

Enrollment and Student Profile:
20 undergraduate students, non-majors

Type of Course:
Introductory course for human health pre-professional, poultry science, and dietetic majors.

Role:
Instructor of Record

Course Content:
Introduces core concepts of microbiology with emphasis on human pathogens during later part of semester.

Teaching Responsibilities:
I was responsible for preparing and presenting lecture content while engaging students with a variety of active learning techniques, and assessing student learning outcomes, and mentoring undergraduate peer learning assistants. *I also had to convert the last half of the course into online learning due to COVID-19.*

Microbiology and Healthcare (4cr; MIBO 2500) **Spring 2019**

Enrollment and Student Profile:
41 undergraduate students, non-majors

Type of Course:
Introductory course for human health pre-professional, poultry science, and dietetic majors.

Role:
Instructor of Record

Course Content:
Introduces core concepts of microbiology with emphasis on human pathogens during later part of semester.

Teaching Responsibilities:
I was responsible for preparing and presenting lecture content, engaging students with several active learning techniques, assessing student learning outcomes, and mentoring undergraduate peer learning assistants.

Teaching or Laboratory Assistant

Graduate Teaching Seminar (GRSC 7770) **Spring 2021**

Enrollment and Student Profile:
20 graduate students

Type of Course:
Provides graduate teaching assistants with knowledge of pedagogical approaches and available support systems within the department.

Role:
Assist instructor of record in preparing course material, lecture activities, facilitate group discussions, and general classroom management tasks.

Course Content:
To prepare entering graduate students for their role as a teaching assistant in microbiology lecture and laboratory courses that introduce core concepts and skills of microbiology.

Teaching Responsibilities:
This is my current TA position. So far, I have assisted in preparing the syllabus, lecture slides, writing announcements, and leading class discussions.

Microbiology and Healthcare (4cr; MIBO 2500) **Fall 2020**

Enrollment and Student Profile:
~100 undergraduate students, non-majors

Type of Course:
Introductory course for human health pre-professional, poultry science, and dietetic majors.

Role:
Instructional Support Teaching Assistant

Course Content:
Introduces core concepts of microbiology with emphasis on human pathogens during later part of the semester.

Teaching Responsibilities:
I was responsible for creating an exam question bank, grading written responses on the exams, reviewing individual student responses to the group activities, and *filling in for instructors quarantined due to COVID-19.*

Bacterial Cultures Stock TA for All Microbiology Laboratory Classes **Fall 2018**

Enrollment and Student Profile:
~10 lab sections for two MIBO courses (2500L and 3510L)

Type of Course:
Introductory laboratory course for majors and non-major students.

Role:
Stock Bacterial Cultures Teaching Assistant

Teaching Responsibilities:
I was responsible for standard laboratory practices, maintaining bacterial stock cultures, and growing cultures for MIBO 2500L and MIBO 3510L.

Introductory Microbiology Laboratory (MIBO 3510L) **Spring 2018**

Enrollment and Student Profile:
40 undergraduate students, 2 sections of majors and non-majors

Type of Course:
Introduce students to laboratory techniques and assays related to core concepts of microbiology for majors and non-majors.

Role:
Teaching Assistant

Teaching Responsibilities:
Manage materials and reagents for bi-weekly laboratory classes, prepared laboratory microscopic slides for in-class demonstrations, conducted lab skill checks with students, graded lab reports, conducted notebook checks, created and facilitated mid-term and final laboratory practical exams, and proctored students during exams.

Introductory Microbiology Laboratory (MIBO 3510L) **Fall 2017**

Enrollment and Student Profile:
40 undergraduate students, 2 sections of majors and non-majors

Type of Course:
Introduce students to laboratory techniques and assays related to core concepts of microbiology.

Role:
Teaching Assistant

Teaching Responsibilities:
Managed materials and reagents for bi-weekly laboratory classes, prepared laboratory microscopic slides for in-class demonstrations, conducted lab skills checks with students, graded lab reports, conducted notebook checks, created and facilitated mid-term and final laboratory practical exams, and proctored students during exams.

Evaluation of Teaching

University of Georgia's Franklin College course evaluations:

University-wide Standard Questions:	*Spring 2020 Section B	*Spring 2019	Fall 2017	Section A
The assignments & activities were useful for learning	**4.09**	**4.22**	**4.45**	**4.17**
The course challenged students with the material	**4.36**	**4.56**	**4.09**	**4.50**
The professor was prepared & materials were organized	**4.36**	**4.89**	**4.73**	**4.83**
The professor adequately used class time	**4.36**	**4.44**	**4.73**	**4.83**
The professor had clear expectations for assignments	**4.55**	**4.78**	**4.55**	**5.00**
The professor maintained class control	**4.64**	**4.67**	**4.91**	**5.00**
The professor adequately presented topics	**4.45**	**4.33**	**4.82**	**5.00**
The professor was willing to help students	**4.55**	**5.00**	**5.00**	**5.00**
The professor allowed students to express differences of opinions	**4.73**	**5.00**	**5.00**	**5.00**
The professor had clear grading expectations	**4.73**	**5.00**	**4.82**	**5.00**
The professor had knowledge of the subjects	**4.73**	**5.00**	**4.27**	**4.83**

* indicates semester where I was instructor of record.

-Spring 2018 (MIBO 3510L) no extra credit was offered for completion of evaluations. No evaluations received.

Responses were on a 1 - 5 scale: 5 = almost always, 4 = frequently, 3 = sometimes, 2 = occasionally, 1 = hardly ever

Student Comments in order of most recent (*Word Cloud crated from statements*):

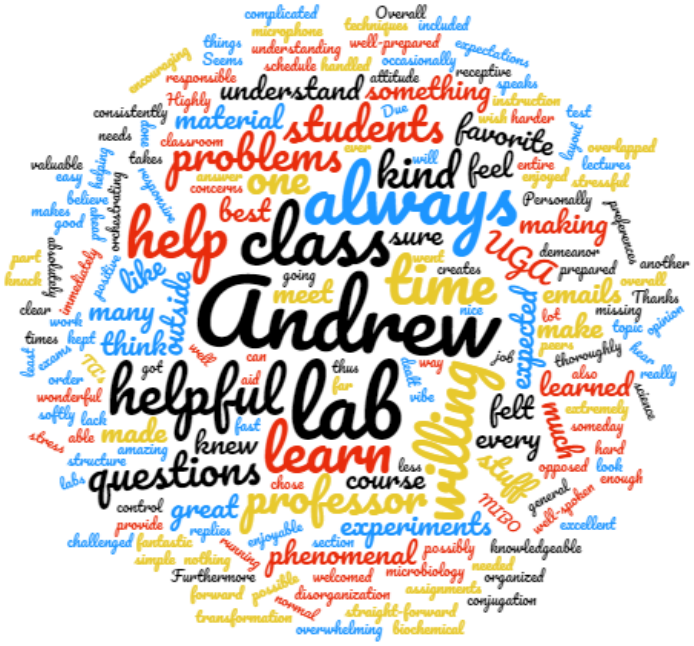
- Andrew is well informed about the class material and is always ready to help and answer questions.
- Very organized class. Seems very receptive to the needs and preferences of students, and the layout made it less stressful to learn so much material.
- This professor is very friendly and always willing to help. He is very knowledgeable of the subject, and because of him, I have really enjoyed taking this course.

- Andrew was very helpful when you needed help, but it was hard to hear him in lectures many times because he speaks kind of softly. If he had a microphone or something, it would have been more helpful, but overall, a good professor and very straight-forward with what was expected for assignments and exams.

- Andrew is the best TA that I've ever had! He is knowledgeable, well-prepared, kind, and more than willing to aid our understanding of the material.

- He is an absolutely phenomenal TA. He consistently knew every answer and was able to provide fantastic instruction on helping us learn the topic. Furthermore, he was willing to meet with us outside of normal time to help us understand problems and learn lab techniques. I cannot stress enough how phenomenal he is.

- Overall, I've learned a lot in this class. In my opinion, the most valuable labs included the transformation, conjugation, and the biochemical test experiments. I feel like I learned so much from them. My least favorite part of the lab was that we had so many experiments that overlapped one another. My peers and I felt this was overwhelming. Andrew was my favorite TA that I've had in a science class at UGA. He was encouraging, kind, well-spoken, and clear in his expectations. He was willing to help both during and outside of class time. He made this lab something to look forward to. Thanks Andrew!!!



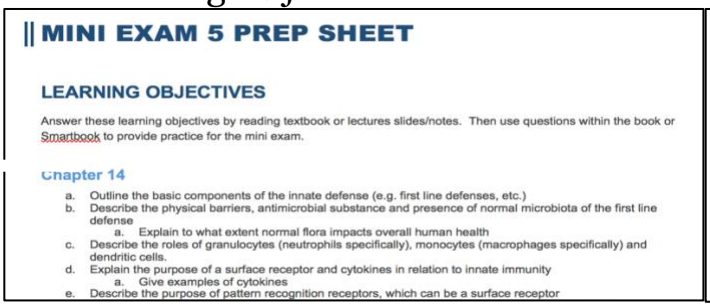
- Andrew is an excellent TA. Has a knack for making really complicated things simple and easy to understand. He is always willing to help, but makes sure that you are being challenged to think and learn. Highly responsive to questions, concerns, and emails. Most of all he has a great demeanor, and creates a positive vibe in the classroom, making the lab enjoyable. Personally, I think he would make a great MIBO professor if he chose to be one. I thoroughly enjoyed the lab, and felt that Andrew did an amazing job of orchestrating our section.

- Andrew was one of the best TA's I have had at UGA thus far. He went out of his way every lab class to make sure all of his students knew what was going on and what was expected of them. Andrew dealt with problems in lab well and was always as prepared as possible (occasionally stuff was missing but this was not under his control and he always got it handled immediately). Due to the general disorganization and lack of order of the course, I believe Andrew had to work harder than any TA I have had before. The problems with the structure had nothing to do with Andrew, and the stuff he was responsible for was always done ahead of time. He always kept a very nice and helpful attitude and questions were welcomed. Andrew replies extremely fast to emails and is as helpful as he possibly can be. He also takes time out of his own schedule to meet students with questions. I feel like Andrew will be a wonderful professor someday, and I wish he was running the entire course for microbiology as opposed to being the TA.

Sample of Teaching Material

Microbiology and Healthcare (MIBO 2500):

Learning Objectives for Mini-Exams



|| MINI EXAM 5 PREP SHEET

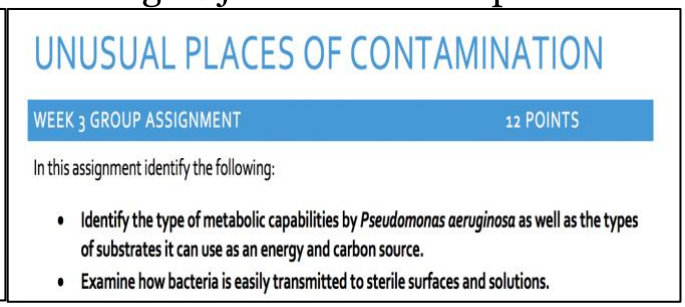
LEARNING OBJECTIVES

Answer these learning objectives by reading textbook or lectures slides/notes. Then use questions within the book or Smartbook to provide practice for the mini exam.

Chapter 14

a. Outline the basic components of the innate defense (e.g. first line defenses, etc.)
b. Describe the physical barriers, antimicrobial substance and presence of normal microbiota of the first line defense
   a. Explain to what extent normal flora impacts overall human health
c. Describe the roles of granulocytes (neutrophils specifically), monocytes (macrophages specifically) and dendritic cells.
d. Explain the purpose of a surface receptor and cytokines in relation to innate immunity
   a. Give examples of cytokines
e. Describe the purpose of pattern recognition receptors, which can be a surface receptor

Learning Objectives for Group Activities

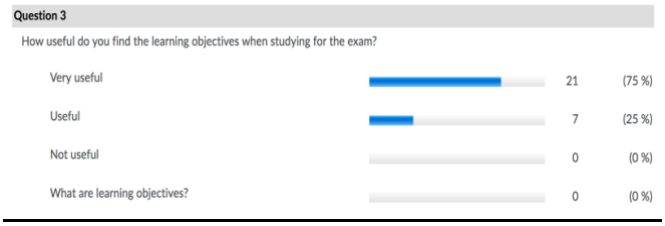


UNUSUAL PLACES OF CONTAMINATION

WEEK 3 GROUP ASSIGNMENT 12 POINTS

In this assignment identify the following:

- Identify the type of metabolic capabilities by *Pseudomonas aeruginosa* as well as the types of substrates it can use as an energy and carbon source.
- Examine how bacteria is easily transmitted to sterile surfaces and solutions.



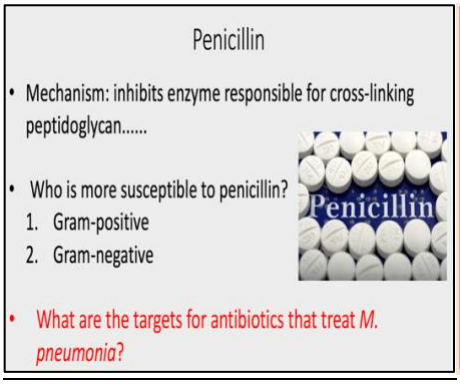
Question 3

How useful do you find the learning objectives when studying for the exam?

Very useful	21	(75 %)
Useful	7	(25 %)
Not useful	0	(0 %)
What are learning objectives?	0	(0 %)

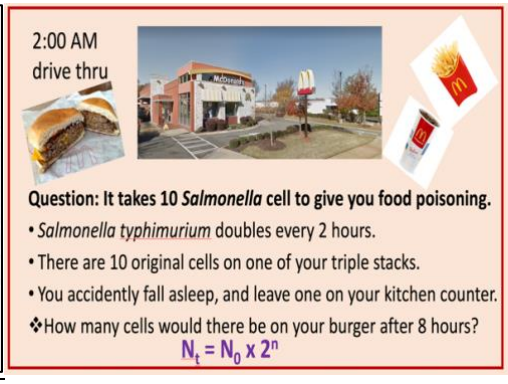
I design learning objectives to guide students when studying course material and to be transparent with my expectations. For the mini-exams, I post learning objectives the day we start new teaching units to foreshadow coming material and for students that choose to work ahead. I instruct them that being able to explain and understand these learning objectives is key to being successful in the course. I will create questions related to the topics, but by no means are these the test questions. For the group assignments, the learning goals are to indicate expectations and aid them in finding where to look for information in the course material.

Lecture Slides:



Penicillin

- Mechanism: inhibits enzyme responsible for cross-linking peptidoglycan.....
- Who is more susceptible to penicillin?
  1. Gram-positive
  2. Gram-negative
- What are the targets for antibiotics that treat *M. pneumonia*?



2:00 AM drive thru

Question: It takes 10 *Salmonella* cell to give you food poisoning.

- *Salmonella typhimurium* doubles every 2 hours.
- There are 10 original cells on one of your triple stacks.
- You accidently fall asleep, and leave one on your kitchen counter.

❖How many cells would there be on your burger after 8 hours?

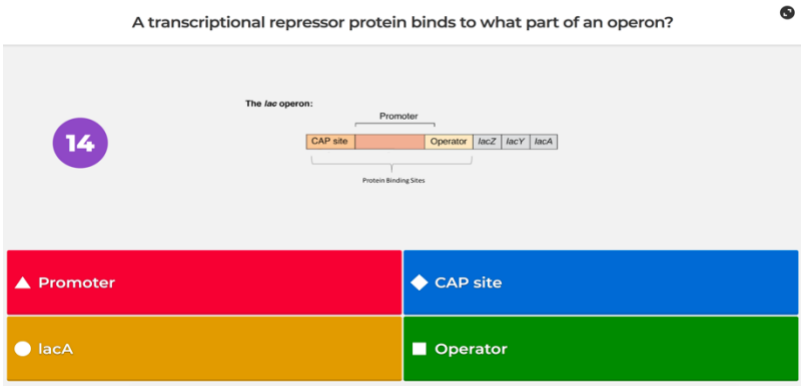
$N_t = N_0 \times 2^n$

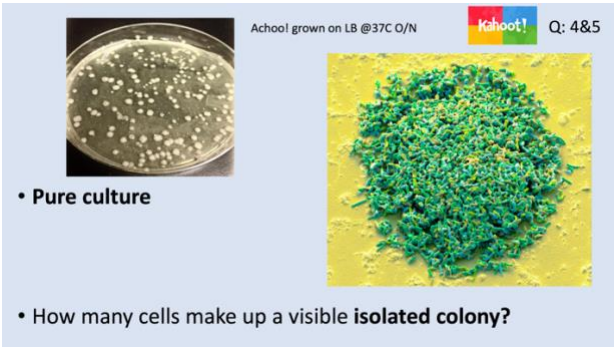
You discovered a potentially new microbe isolated below the mud.
What type of environment is this?
How would you attempt to grow this microbe in your lab?

Frequently I pause and ask questions during lecture time to facilitate reflection on the material. Most often this is in a think-pair-share or open discussion format. These slides are examples of questions I ask students in class. Slide one is me asking them to apply core concepts to common human pathogen that is relevant in a healthcare setting. Slide two is a calculation problem that is integrating local restaurants and pop culture to relate the material in a real-world scenario. Slide three is asking students to critically think about core concepts and terms presented in the previous slides while adding diversity through imagery that are different from those in the textbook.

Sample of Teaching Material

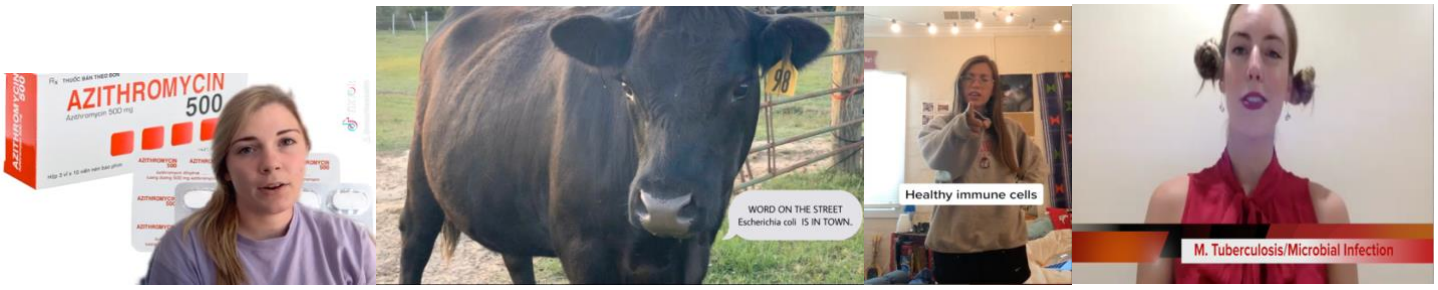
Kahoot!:





For each unit covered in the class, I will create Kahoot questions as a form of gamification for the students to play during class using their devices. The gamified questions are integrated into the lecture slides where we will pause, answer questions related to the topic, and discuss all choices. Kahoot gives me real-time feedback from my students to understand their misconceptions while adding a degree of competition to the course. My students absolutely enjoy this and often ask for it to be done more. However, the purpose is to review concepts and allow me to formatively assess students via the report generated from playing the game. Picture one is a question about the *lac* operon. Picture two has the Kahoot logo in the top right of the lecture slide indicating which questions are to be played next for microbial growth topics.

High-Stake Group Assignment: Disease Video



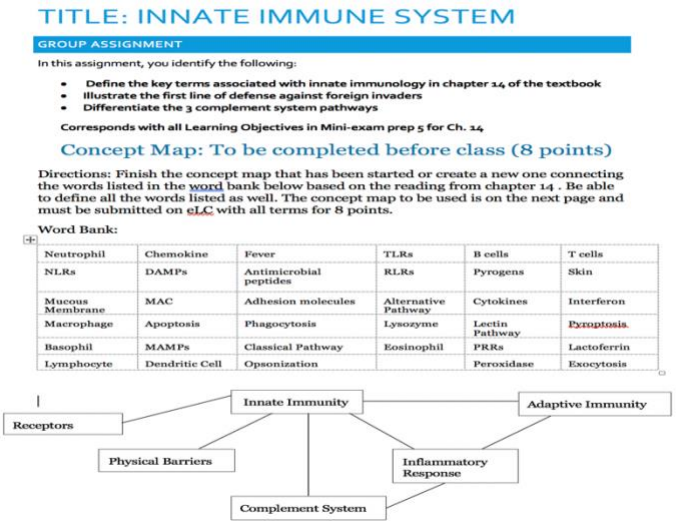
Bringing out the creativity in my students while integrating core concepts in the class is the most important and rewarding factor for me as a teacher.

These images are taken from videos of my students who work in groups to create a skit as a high-stake assignment at the end of the semester, alongside, a listening guide and peer evaluations. Students will often use technology that is popular in current pop culture such as their smart phone, TikTok, Zoom, video editor, and many more to synthesis their video. In the video, students are asked to investigate a human pathogen and its corresponding disease. In their skit, they explain key aspects of the pathogen and disease while incorporating related current events or relevant issues with the topic.

Sample of Teaching Materials

Learn by Mapping

For the two chapters that cover the immune system, I incorporate a concept map as the group activity that is facilitated by undergraduate peer learning assistants and myself. Both chapters are very heavy in terminology, which is often new to students. In order to review terms with students, they are asked to select appropriate objects from a provide list (S), organize them based on relationship (O), and integrate them into a conceptual map (I). Each group member brings their own draft of the map as an out of class low-stake assignment, and compare it to one another. Students then create a final draft to turn in for a grade.



TITLE: INNATE IMMUNE SYSTEM

GROUP ASSIGNMENT

In this assignment, you identify the following:

- Define the key terms associated with innate immunology in chapter 14 of the textbook
- Illustrate the first line of defense against foreign invaders
- Differentiate the 3 complement system pathways

Corresponds with all Learning Objectives in Mini-exam prep 5 for Ch. 14

Concept Map: To be completed before class (8 points)

Directions: Finish the concept map that has been started or create a new one connecting the words listed in the word bank below based on the reading from chapter 14 . Be able to define all the words listed as well. The concept map to be used is on the next page and must be submitted on eLC with all terms for 8 points.

Word Bank:

Neutrophil	Chemokine	Fever	TLRs	B cells	T cells
NLRs	DAMPs	Antimicrobial peptides	RLRs	Pyrogens	Skin
Mucous Membrane	MAC	Adhesion molecules	Alternative Pathway	Cytokines	Interferon
Macrophage	Apoptosis	Phagocytosis	Lysozyme	Lectin Pathway	Pyroptosis
Basophil	MAMPs	Classical Pathway	Eosinophil	PRRs	Lactoferrin
Lymphocyte	Dendritic Cell	Opsonization		Peroxidase	Exocytosis

Receptors

Innate Immunity

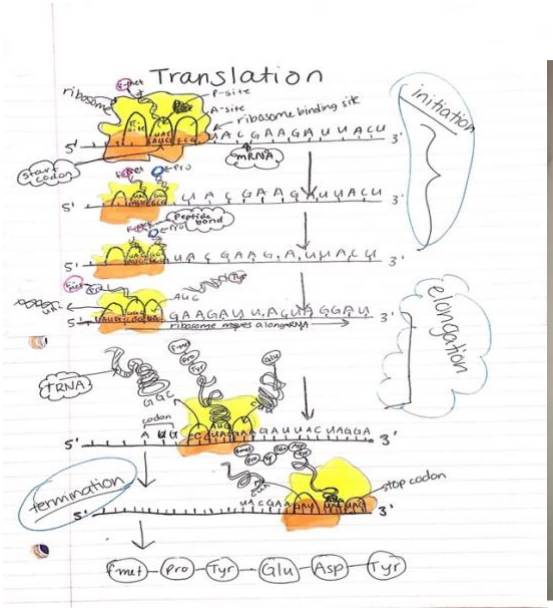
Adaptive Immunity

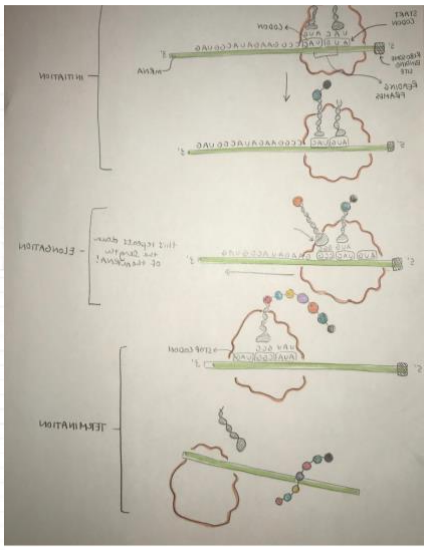
Physical Barriers

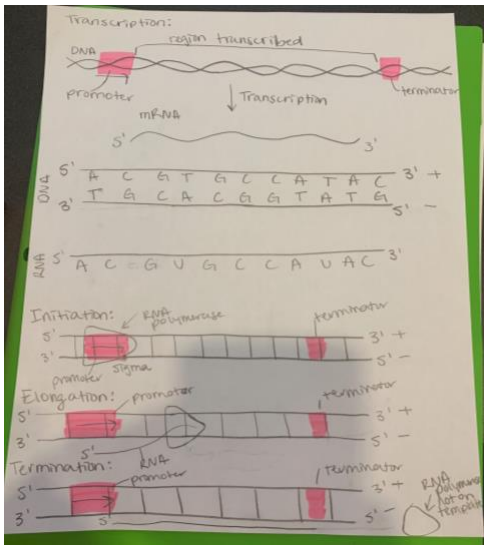
Inflammatory Response

Complement System

Learn by Drawing & Summarizing







Students have difficulty comprehending biological systems that involve multiple steps. This is my way of helping my students digest these systems to generate learning. As a low-stakes out-of-class assignment, I will provide a list of terms referring to objects involved in a couple of complex biological processes (transcription and translation seen above) and ask students to select the appropriate objects (S) for each process, organize the objects (O), draw a conceptual diagram of the mechanisms (I), and write a summary about their objects (I). Students will then share the assignment in-class with their neighbors, discuss it, and provide feedback to one another.

Sample of Assessment of Student Work

Rubrics

Create the listening guide (10 points) – 2 pages max

Content details	Score #
Describe causative agent If bacterial, identify morphology, Gram stain, metabolism and key virulence factors If viral, identify genome structure, envelope (if present) and key replication mechanisms (is replicase or DNA polymerase used?)	2 points
Explain signs and symptoms of the disease initiated by this pathogen	2 points
Describe the microbe's pathogenesis and how it relates to symptoms	2 points
Outline epidemiology of the pathogen in the US	2 point
Identify treatment (specific antimicrobial) and prevention measures (vaccine, personal behaviors, etc.)	2 point

Using the information detailed above, create an outline of this information. When finished, create a copy and remove key terms or phrases to create the listening guide. Upload both the completely filled out Listening Guide and the blanked version of the Listening Guide

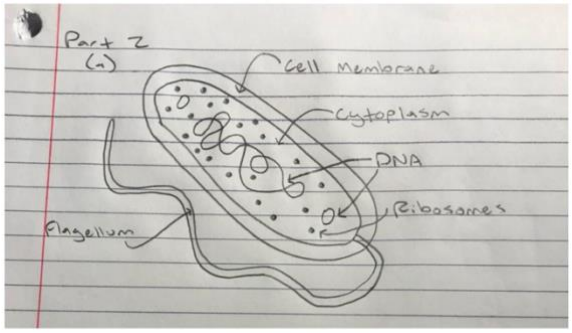
General Rubric for homework questions

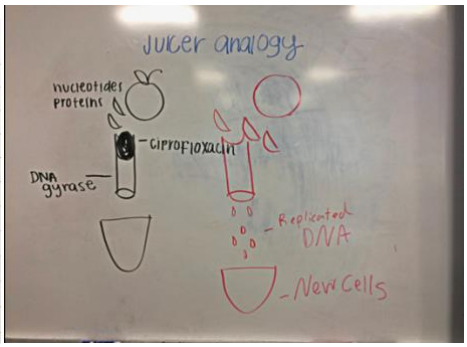
	Full Credit for the question	75% credit	50% credit	25% credit	No credit
Content	Your answer includes all possible information for the question, is accurate, and relevant. It demonstrates a comprehensive understanding of the material.	Your answer includes the majority of the information for the question, is accurate, and relevant. It demonstrates an understanding of the material.	Your answer includes most of the information, is partially accurate, and relevant. It demonstrates a partial understanding of the material. You do not explain "why."	You answers may be inaccurate or irrelevant; demonstrates an incomplete understanding of the material.	Your assignment is **late** or does not demonstrate an understanding of the question.
Requirements	All parts of the answer are given and correct. You explain "why" given by your answer.	Most of the answer is demonstrated or part of it is incorrect. You explain "why" given by your answer.	Half of the answer is demonstrated or incorrect. You do not explain "why."	A limited or inaccurate answer is demonstrated.	All possible parts of the answer is incorrect.

I post on eLC each assignment with an associated rubric. Being transparent with my expectations for each assignment to help in quickly assess student's work in a fair and consistent manner. The rubric on the left is for the listening guide for the high-stake video and on the right is a general rubric for how to answer written questions for exams and low-stake assignments.

Formative assessment

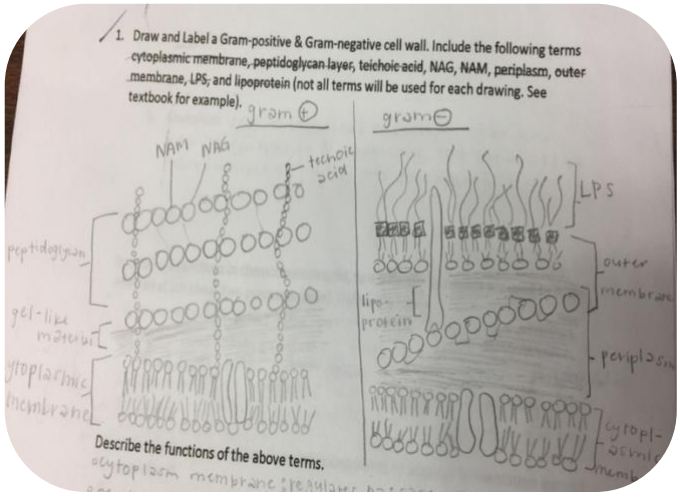
During class, I will ask students to draw on a piece of paper or at the board objects and/or processes that we are discussing. The left picture is a student's drawing of a prokaryotic cell (an object). The right picture is a group of students metaphorically depicting how an antibiotic blocks cellular replication (dietetic majors using the process of juicing). We then openly discuss the drawing to make any corrections.





Summative assessment

Below are questions I created to assess students' knowledge on the topic of bacterial cell wall structure.



25. Proteins are the most abundant macromolecule class in a typical bacterial cell? List two potential functions of this macromolecule. Briefly (one sentence) explain the function you listed (+6 pts).

a. transport: can transport organisms in and out of cell through cell membrane

b. motility: proteins make up the flagella & cilia often used for movement

Innovative Teaching Project and Role

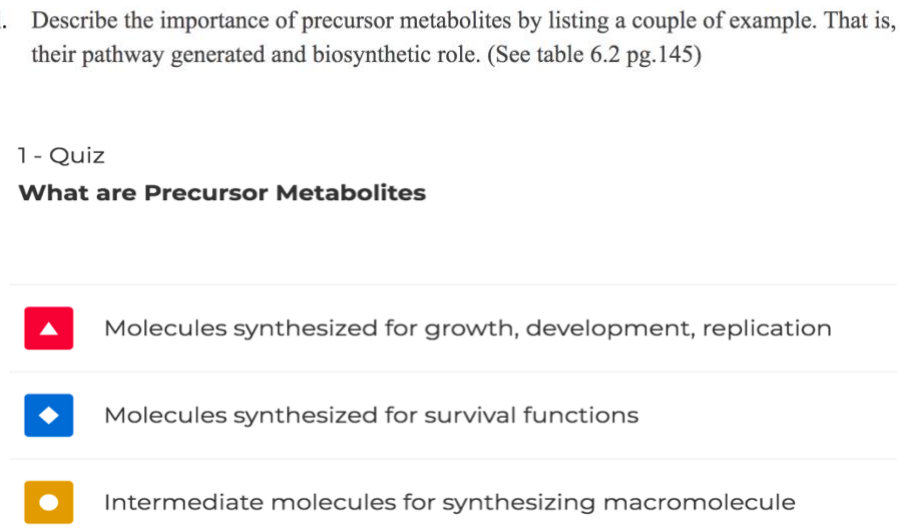
Assessment of Student Progress in a Microbiology Course Using Gamification & Exam Scores

Role: Instructor of Record

Students are often reluctant to reach out to one another or the instructor when falling behind in class. I use Kahoot and exam scores to longitudinally monitor students as they progress in my course to determine when I should connect with them based on my concerns with their grades.

Student_ID	Kahoot	Exam1	Kahoot	Exam2	Kahoot	Exam3	Kahoot	Exam5	Kahoot	Exam6
1	80%	48%	75%	75%	70%	54%	0%	73%	43%	75%
2	--	59%	50%	88%	40%	76%	--	92%	14%	83%
3	60%	64%	75%	83%	40%	43%	40%	73%	--	68%
4	60%	64%	0%	82%	20%	63%	--	81%	--	87%
5	40%	65%	50%	81%	50%	57%	--	66%	--	58%
6	100%	69%	25%	88%	50%	90%	--	85%	--	85%
7	60%	73%	100%	82%	50%	78%	20%	61%	--	60%
8	80%	77%	75%	73%	40%	60%	--	74%	57%	46%
9	40%	77%	25%	Dropped Course	--	--	--	--	--	--
10	80%	77%	100%	97%	60%	72%	40%	69%	57%	73%
11	40%	78%	50%	84%	60%	64%	20%	83%	43%	83%
12	40%	78%	75%	93%	--	66%	20%	85%	--	58%
13	40%	79%	75%	67%	60%	39%	60%	75%	29%	39%
14	60%	81%	50%	89%	30%	65%	20%	81%	--	84%
15	80%	88%	75%	84%	60%	74%	60%	88%	29%	75%

The Kahoot questions are multiple choice and derived from the Learning Objectives in my 2019 course. Each Kahoot question set is associated with the current or previous lecture material for a given exam unit. It is used as a formative assessment of how prepared the student was on a given day. Of the 42 studetns, 15 were identified as at risk of falling behind. These studets received scores less than 80% on two exams. Anyone with less than 80% are marked in orange and greater than 80% marked in blue for Kahoot and the Exam columns.



At any point in the semester when a student scores less than 80% on two exams, I sent an email to the student inquiring about their study habits, study partners, awareness of services offered by the Division of Academic Enhancement (DAE), and interest in connecting with other students in the course. I find by initiating this conversation it will often lead to students connecting with one another, myself, and/or study services offered by the university.

Conclusion

- Students at risk of falling behind in the course were identified
- 33% of the students were connected with other peers in study groups
- ~33% of the students began to regularly meet during office hours
- 20% of students sought help with the DAE
- In the future, I will compare my 2019 and 2020 Kahoot question set to look for statistical trends
- Present data as poster at Austin-Lily

Joined a Study Group	5
Had a Study Group	10
Met With Professor	6
DAE	3

List of Professional Teaching Activities
Mentorship

Undergraduate peer assistants (MIBO 2500): 2019 – present

All quotes are direct and taken from email exchanges between myself and the peer assistants

- **Spring 2019 Cohort:** 8 students were invited by Dr. Walker from the previous term. She and I mentored these students throughout the semester at facilitating group activity days.
- **Spring 2020 Cohort:** I invited 3 of my students from the spring 2019 semester to participate. I and Dr. Walker and I mentored 8 students in the program.
- **Spring 2021:** I invited 4 students from my Spring 2020 semester to participate in the program lead by Dr. Walker and two other lecture teachers.
- **Megan Macia (Spring 2021):** "I am so excited to say that I have been accepted to Yale's PA program! I really appreciate your help throughout this process, and I know your recommendation strengthened my application. Additionally, I loved being a MPA this semester and I am sure that helped my application as well."
- **Lauren Brown (Spring 2021):** "I am honored to be a Microbiology Peer Assistant!" "I just wanted to inform you that I got into Augusta's Master of Science of Nursing program for fall 2021! Thank you so much for writing me a letter of recommendation and noticing my hard work. I cannot wait to start nursing school and can hopefully apply microbiology while there!"
- **Chelsea Brown (Spring 2021):** "I'm so lucky to have such amazing mentor like yourself supporting me as I pursue my dream of working in the healthcare field!"

Spring Teaching Symposium: hosted a break session "Efficient Grading" 2020

Spring Teaching Symposium: co-created workshop 2020
"Building Meaningful Knowledge to Apply to New Situations in the Classroom"

TA café: co-coordinator for TA support group event 2020

Review Panel for Future Faculty Fellowship Applicates: selecting next year's cohort 2020

Volunteer tutor: implemented Select-Organize-integrate model and videos 2019
Sarah Margaret (2019): "I couldn't of done it without your gracious help!!!"

TA orientation: facilitator at the annual science laboratory teaching assistant orientation event 2019

Spring Teaching Symposium: invited guest speaker "Making Opportunities to Teach" 2019

Transformative Learning Strategies Course (UNIV2301): invited panelist "Life being a grad student" 2019

Mid-Semester Formative Evaluations: assisted in facilitating for graduate students 2019

Campus Sustainability Grants Committee: evaluated proposals seeking funding addressing issues 2019
outlined in UGA's 2020 Strategic plan ($40,000 budget; $5,000 award)

FFA students at Malcom Bridge Middle School: students created Agri-Science Fair projects 2017 – 2018

Pedagogical Conference Presentation

Lily Conference Series for Evidence-based Teaching and Learning, Lily-Austin Meeting June, 2021

- Will submit a poster proposal for further analysis of Kahoot data and completion of the Interdisciplinary Certificate in University Teaching.
- Will submit a proposal for a rapid talk about creating a writing intensive component form the Learn to Draw and Summarize activities in MIBO 2500 course.

Programs and Awards

Interdisciplinary Certificate in University Teaching Pending Austin, Lily June 2021

This certification offered via the Graduate School is designed to develop mastery of teaching at the level of higher education by taking courses taking course in pedagogical theory and state-of-the-art practices, by developing a scholarship-of-teaching and learning (SOTL) research project, by presenting the SOTL project at a professional conference, and by creating a teaching portfolio all with the guidance of mentors recognized for their accomplishments in college- and university-level pedagogy.

Future Faculty Fellows Program 2019 – 2020

A highly competitive yearlong professional development program for 15 selected students from across campus who demonstrated a dedicated to teaching in their assistantships. It is designed to prepare them for a job in academia and their future faculty position.

Outstanding Teaching Assistant 2020

Awarded by the Center for Teaching and Learning department and the Graduate School for teaching assistants that demonstrate superior teaching skills.

Special Training or Teaching Experience

Course Work

GRSC7770: Graduate Seminar in Teaching (3 credits) 2017

This course was an introduction to pedagogical methods and university-wide resources for instructional support. It provided me with current approaches in teaching and available support systems.

GRSC 7900: Course Design (3 credits) 2018

This course provided me with a foundation in course design and pedagogical theory. It taught me current methods in active learning, assessments, and innovative teaching methods.

WIPP 7001: Pedagogy of Writing in the Disciplines (3 credits) 2020

This course taught me the theory of writing in the discipline. We developed a writing intensive course and methods of implementing writing activities.

Conferences and Workshops

Spring Teaching Symposium at UGA 2019

This is a graduate student-run event in which peers present workshops and breakout sessions covering how they implement teaching and learning concepts in their respected classroom.

Lesson Planning 2021

This workshop was part of a development series devoted to strategies to implement the Bridge Pre-Assessment Post-Assessment Participatory Learning (BOPPPS) method of instruction. It provided me with new ideas for creating lesson plans in my class.

GRSC 7770 Instructor Workshop Series 2020

This series of workshops provides insight into being a TA for the GRSC 7770 course. It provided me with expectations and ideas for virtual engagement with students in GRSC 7770 in the COVID-19 era.

Teaching Philosophy Statements 2020

This workshop was part of a series in which students outlined and developed a teaching philosophy statement. It provided me with an occasion to revisit my statement and gain feedback.

Writing a Diversity Statement 2020

This workshop was part of a series in which students outlined and developed a diversity statement. It provided me with an occasion to revisit my statement and gain feedback.

Student Engagement 2019

This workshop was presented by a national keynote speaker discussing recent research into the rationale for pedagogical engagement and student motivation. This taught me current techniques to keep my students engaged with my course.

Microbiology Peer Mentoring 2019

This two-day workshop discussed theory and techniques for mentoring students in a STEMS field. This allowed me to interact with faculty and peers in the department who were currently peer mentors.