

STEM Outreach and Recruitment Team (SORT)

MCB 397C, Spring 2021

Credits: 1

Class meeting times: Monday, 11:00- 11:50 AM

Live Online until Phase II courses come to campus, then BSW 210

Instructor Information Lisa Rezende, Ph.D. (she/her) Associate Professor of Practice Department of Molecular and Cellular Biology University of Arizona	Contact Information Email: lrezende@arizona.edu Phone: (520) 621-9729 Office Hours: Tuesdays 2-3 PM over Zoom Once the class is back in person, I will be available for in-person appointments on Mondays. Please email to schedule
Nancy Horton, Ph.D. Professor Department of Molecular and Cellular Biology University of Arizona	Contact Information Email: nhorton@arizona.edu Phone: 520-626-3828 Office hours: by appointment

Meeting Times:

This class is scheduled to be taught in the IN-PERSON modality.

We will be meeting remotely until the University notifies us that in-person meetings may commence. We will meet on Mondays from 11:00 AM – 11:50 AM and conduct class discussions and presentations as scheduled.

- When the COVID-19 situation permits teaching on campus, we will be meeting **Mondays from 11:00 AM – 11:50 AM in BSW 210**. Students who do not wish to return to campus will have the option of joining the class via Zoom. Please see Dr. Rezende with any questions or concerns.
- If pandemic conditions warrant, the University may require that we return to remote operations. If that is the case, we will notify you by D2L Announcement and email that we are moving to remote operations.

Communicating with the Instructors

We post all general course announcements to the D2L news section.

Dr. Rezende (Course Coordinator): Please direct any course organization questions to me. Any direct electronic correspondence from me will come from university email account lrezende@arizona.edu or D2L. I will make every effort to answer all emails within 24 hours on weekdays, 48 hours on weekends. If you have not heard from me after 24 hours, **please send another email or leave a message on my voicemail.**

Course Description

The purpose of the STEM Recruitment & Outreach Team (SORT) is to engage undergraduate students majoring in the life sciences in educational outreach by generating an interest in and promoting an understanding of the biological science topics among elementary school students, middle school students, high school students, fellow undergraduates, and the general public. In the area of recruitment (primarily the role of MCB Ambassadors) is to serve as representatives of the MCB department, and to assist current and potential future MCB students through related recruitment and outreach activities. This course will provide training in public speaking, outreach, and recruitment for participants.

Course Goals/ Learning Objectives

In this course, you will:

- Practice effective public speaking.
- Serve as an advocate for post-secondary education and for education in science, technology, engineering, and math (“STEM”)
- Explain biological topics (e.g. concepts in biology, UA faculty research, etc.) in layman’s terms.
- Conduct basic scientific demonstrations and/or presentations in a knowledgeable and effective manner.

Class Activities and Grading

In this course, points will be earned based on the following activities:

- **Class attendance (one point per week for 13 weeks-you may miss two classes without affecting your grade).** Be prepared for in-class discussions by doing the assigned reading in advance. Once we return to campus, students have the option of attending in-person or via Zoom.
- **Outreach/recruitment activities or generation of public facing throughout the semester (1 point per hour of activity, planning, preparation, and/or clean up time; 15 total hours expected).** These activities include volunteering at virtual STEM outreach and recruitment events, virtual science fair judging, or creating public facing STEM outreach or recruitment materials. You will write a reflection for each activity.
- **Elevator Pitch (5 points)**
- **The planning and presentation of a science demonstration or “Ted Talk” (10 points).** Students will identify, plan, and conduct a demonstration, talk, or social media campaign in class to gain practice in giving presentations.
- **A final film project (5 points).** Students will be required to create a 2–3-minute video on one of the following science outreach topics:
 - An interview with an MCB faculty member or student
 - A tour of a lab (with permission and proper distancing)
 - Highlighting a science-related resource (such as the MCB advising office or another major advisor)
 - An educational film on how to conduct a science demonstration (for other educators)
 - Science demonstration for social media

Students' final grades will be based on 50 total points:

Assignment	Available Points
Class Attendance (in-person or via Zoom)	13
Outreach/Recruitment Activities and Reflection	15
Elevator Pitch	5
Science Demonstration/Talk	10
Final Film Project	5
Final Course Reflection	2
TOTAL:	50

The grades available for this course (MCB 397C) are

Point Total	Grade
45-50 points	A
40-44 points	B
35-39 points	C
30-34 points	D
29 points or below	E

Incompletes (I) are only given in the specific case of a student who is passing the course and has missed a portion of the assigned work because of documented illness or other extreme cause.

Classroom attendance:.

- If you feel sick or may have been in contact with someone who is infectious, stay home. Except for seeking medical care, avoid contact with others and do not travel.
- Notify Dr. Rezende (Irezende@arizona.edu) if you will be missing an in person or online course meeting, or you will miss an assignment deadline.
- Non-attendance for any reason does not guarantee an automatic extension of due date. MCB 397c is an active discussion-based course so participation is essential. If you are sick or cannot attend (either in-person or over Zoom), please contact Dr. Rezende as soon as possible.
- Campus Health is testing for COVID-19 if you have symptoms. Please call (520) 621-9202 before you visit in person.
- Visit the UArizona COVID-19 page for regular updates.

Class Recordings: For lecture recordings and Zoom sessions, must access content in D2L only. Students may not modify content or re-use content for any purpose other than personal educational reasons. All recordings are subject to government and university regulations. Therefore, students accessing unauthorized recordings or using them in a manner inconsistent with UArizona values and educational policies are subject to

suspension or civil action. If you have concerns about being identified in a class recording, please contact Dr. Rezende.

Readings

All course readings will be available on D2L. There is no required book for this course

Tentative Class Schedule

Week	Date	In Class Activity	For Next Week
1	1/25	Discussion: Why are you hear? Why is outreach important? What have you done in the past? What would you like to do in the future?	Read: Creating An Elevator Pitch - Two Minutes or Less From UC Santa Barbara Career Services Read: Two Minutes to Impress by Roberta Kwok (<i>Nature</i> 494: 137-138 (2013))
2	2/1	The elevator speech (all about you): What is it and why is it important?	Prepare: Your 2-minute elevator speech to give in class on 2/8
3	2/8	The elevator speech <ul style="list-style-type: none"> • Give your elevator speech! • Fill out feedback forms for you peers 	Watch: Online Workshop: Activities and Conversations about Synthetic Biology: The Building with Biology Project (Recorded 12/8/2015) Running time ~ 1 hour
4	2/15	Science demonstrations What works? What does not?	Read: Kennedy, EB et al., "Preaching to the scientifically converted: evaluating inclusivity at science festival audiences," <i>International Journal of Science Education, Part B</i> ," 8 : 14-21 (2018). Prepare: Find 2 examples of science-related events in Tucson to bring to our discussion on inclusivity
5	2/22	Science demonstration: Who is our audience? <ul style="list-style-type: none"> • Discuss inclusivity in science outreach • Discuss science presentation assignment 	Read: National Science Board, "Science and Technology: Public Attitudes and Understanding," from <i>Science and Engineering Indicators 2018</i> . Read Sections on "Public Knowledge about S&T" (p. 33-50), "Public Attitudes about S&T" (p. 52-61) and select one S&T related issue from the list on p. 68-89 to discuss in class.

			Prepare: Idea for your own demo or talk
6	3/1	Science for the public: Know your audience? <ul style="list-style-type: none"> • Discuss what you can expect your audience knows • Questions on presentation assignment 	Read “Misconceptions as barriers to understanding science,” from <i>Science Teaching Reconsidered: A Handbook</i> , National Academies Press, 1997. Prepare: Jot down 2 misconceptions about biology that you have heard or seen for next week’s discussion
7	3/8	Science for the public: Addressing misconceptions <ul style="list-style-type: none"> • Discuss biology misconceptions • Discuss progress on presentation assignment 	Read: Lortie, C, “ Ten simple rules for short and swift presentations ,” <i>PLOS: Computational Biology</i> , 13 : e1005373 (2017). Prepare: Any part of your presentation you would like feedback on next week
8	3/15	Science communication: <ul style="list-style-type: none"> • Discuss science communication strategies • Pre-presentation feedback 	Prepare: Prepare your presentation
9	3/22	Your own science presentation (Demonstration or short talk) <ul style="list-style-type: none"> • In class presentations to invited audience 	Prepare: Prepare your presentation
10	3/29	Your own science presentation (Demonstration or short talk) <ul style="list-style-type: none"> • In class presentations to invited audience 	Read: Fuesting, MA and Diekman, AB, “ Not By Success Alone: Role Models Provide Pathways to Communal Opportunities in STEM ,” <i>Personality and Social Psychology Bulletin</i> , 43 : 163-176 (2017). Prepare: Who was your role model in science and why?
11	4/5	Science and young people: <ul style="list-style-type: none"> • Discuss being a good role model • Introduce final film project 	Read: Executive summary (p. 11-15) of Making Science Matter: Collaborations Between Informal Science Education Organizations and Schools from the Center for Advancement of Informal Science Education, March 2010 Prepare: Think about a science outreach activity that you have participated in and

			how it fits into this framework. What is working? What could work better?
12	4/12	<p>Informal science education: Discuss what makes an enriching experience</p>	<p>Read: Viskontas, I, “The Challenges of Changing Minds: How Confirmation Bias and Pattern Recognition Affect Our Search for Meaning,” from <i>Pseudoscience: The Conspiracy Against Science</i> (Kaufman, AB and Kaufman, JC eds), MIT Press 2018.</p> <p>Read: National Academies of Sciences, Engineering, and Medicine; Health and Medicine Division; Board on Population Health and Public Health Practice; Roundtable on Health Literacy. Addressing Health Misinformation with Health Literacy Strategies: Proceedings of a Workshop—in Brief. Wojtowicz A, editor. Washington (DC): National Academies Press (US); 2020 Dec 17. PMID: 33351400.</p> <p>Prepare: Think about how pseudoscience differs from science misconceptions. How do you approach each during an outreach event?</p> <p>Prepare: Decide on topic for your film project</p>
13	4/19	<p>Combatting pseudoscience and disinformation</p> <ul style="list-style-type: none"> Discuss pseudoscience and how it affects outreach activities 	<p>Read: Haber, N, et al., “Causal language and strength of inference in academic and media articles shared in social media (CLAIMS): A systematic review,” <i>PLoS One</i>, 13: e0196346 (2018).</p> <p>Prepare: Bring in 2 example of science content from the social media platform of your choice to discuss during class.</p>
14	4/26	<p>Science in social media Discuss examples of science in social media</p>	<p>Read: Sung, V, et al., “Engaging the Public Where They Live: Lessons for Better Science Communication from</p>

			<p>Media Personalities and Strategists,” <i>Medium</i>, July, 2018.</p> <p>Read: Buchanan T. Why do people spread false information online? The effects of message and viewer characteristics on self-reported likelihood of sharing social media disinformation. <i>PLoS One</i>. 2020 Oct 7;15(10):e0239666. doi: 10.1371/journal.pone.0239666. PMID: 33027262; PMCID: PMC7541057.</p> <p>Prepare: Work on film project</p>
15	5/3	<p>Outreach beyond this course:</p> <ul style="list-style-type: none"> • Discuss opportunities for continuing outreach • Feedback on film draft • 	Complete: Film project
Final	Due by Tuesday, May 11 th at 8 PM	Complete Reflection, turn in films	

Disability Resources: If you anticipate issues related to the format or requirements of the course, please contact me. I would like us to discuss ways to ensure your full participation in the course. If you determine that formal, disability-related accommodations are necessary, it is very important that you be registered with Disability Resources (520-621-3268; <http://drc.arizona.edu>) and notify me of your eligibility for reasonable accommodations. I can then work with you and the DRC staff to coordinate your accommodations.

Academic Integrity: Violations of scholastic ethics are considered serious offenses by the University of Arizona and by your instructor. All work done for this class must be your own. You may collaborate with your colleagues on class activities and projects, but your performance on all graded work should be your own, unless you are turning in a group project.

The University of Arizona Dean of Student’s office has a site providing useful tips for avoiding plagiarism <http://deanofstudents.arizona.edu/helpfullinksforstudents>. Any form of cheating or plagiarism will be dealt with severely and may result in a grade of “E” for the course. For more information on the University of Arizona’s academic integrity policies, please see: <http://studpubs.web.arizona.edu/policies/cacaint.html>

In-person Class Rules and Policies

Face Coverings: Face coverings are required in our classroom: Per UArizona’s Administrative Directive, face coverings that cover the nose, mouth, and chin are required to be worn in all learning spaces at the University of Arizona (e.g., in classrooms, laboratories and studios). Any student who violates this directive will be asked to immediately leave the learning space and will be allowed to return only when they are wearing a face covering. Subsequent episodes of noncompliance will result in a Student Code of Conduct complaint being

filed with the Dean of Students Office, which may result in sanctions being applied. The student will not be able to return to the learning space until the matter is resolved.

- The Disability Resource Center is available to explore face coverings and accessibility considerations if you believe that your disability or medical condition precludes you from utilizing any face covering or mask option. DRC will explore the range of potential options as well as remote course offerings. Should DRC determine an accommodation to this directive is reasonable, DRC will communicate this accommodation with your instructor.

Physical distancing is required in our classroom: During our in-person class meetings, we will respect CDC guidelines, including restricted seating to increase physical distancing. Any student who does not maintain physical distance from others may be asked to immediately leave the learning space. Noncompliance may result in a Student Code of Conduct complaint being filed with the Dean of Students Office, which may result in sanctions being applied.

Resources for Students

Academic advising: If you have questions about your academic progress this semester, or your chosen degree program, please note that advisors at the Advising Resource Center can guide you toward university resources to help you succeed.

Life challenges: If you are experiencing unexpected barriers to your success in your courses, please note the Dean of Students Office is a central support resource for all students and may be helpful. The Dean of Students Office can be reached at 520-621-2057 or DOS-deanofstudents@email.arizona.edu.

Physical and mental-health challenges: If you are facing physical or mental health challenges this semester, please note that Campus Health provides quality medical and mental health care. For medical appointments, call (520-621-9202. For After Hours care, call (520) 570-7898. For the Counseling & Psych Services (CAPS) 24/7 hotline, call (520) 621-3334.

Code of Conduct

Please review the University's Code of Conduct information, which can be found at:
<https://deanofstudents.arizona.edu/policies-codes>

Classroom Behavior

The Arizona Board of Regents' Student Code of Conduct, ABOR Policy 5-308, prohibits threats of physical harm to any member of the University community, including to one's self.

Disruptive Student Behavior

Students are expected to be familiar with the UA Policy on Disruptive Student Behavior in an Instructional Setting found at:

<http://policy.arizona.edu/education-and-student-affairs/disruptive-behavior-instructional-setting>

Threatening Student Behavior

The University of Arizona seeks to promote a safe environment where students and employees may participate in the educational process without compromising their health, safety or welfare. The Arizona Board of Regents' Student Code of Conduct, ABOR Policy 5-308, prohibits threats of physical harm to any member of the university community, including to one's self. Threatening behavior can harm and disrupt the University, its community and its families.

Threatening behavior means any statement, communication, conduct or gesture, including those in written form directed towards any member of the university community that causes a reasonable apprehension of physical harm to a person or property. A student can be guilty of threatening behavior even if the person who is the object of the threat does not observe or receive it, so long as a reasonable person would interpret the maker's statement, communication, conduct or gesture as a serious expression of intent to physically harm. You are encouraged to read more on this at: <http://deanofstudents.arizona.edu/accountability/disruptive-student-behavior>

The Policy on Threatening Behavior by Students found at: <http://policy.web.arizona.edu/education-and-student-affairs/threatening-behavior-students>

Student Code of Academic Integrity

Academic Integrity at the University of Arizona is the principle that stands for honesty and ethical behavior in all homework, tests and assignments. All students should act with personal integrity and help to create an environment in which all can succeed.

Dishonesty will not be tolerated in this course. This includes, but is not limited to, cheating, plagiarizing, fabricating information or citations, facilitating acts of academic dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students. Students who are found to be dishonest will be reported to the Dean of Students Office and receive a sanction, such as a failing grade on the assignment, exam, and/or in the course. Students with questions on this policy should refer to the UA Code of Academic Integrity, available at: <http://deanofstudents.arizona.edu/policies-and-codes/code-academic-integrity>

Plagiarism

This course will be using Turnitin, a plagiarism detection software, for some assignments.

The University Libraries have some excellent tips for avoiding plagiarism, available at:

<http://www.library.arizona.edu/help/tutorials/plagiarism/index.html>

Discrimination and Harassment

Policies against discrimination and harassment, along with offices for reporting concerns related to discrimination or harassment, <http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy>

Communication

You are responsible for reading emails sent to your UA account from your professor's UA account and the announcements that are placed on the course D2L site. Information about readings, news events, your grades, assignments and other course related topics will be communicated to you with these electronic methods. The official policy can be found at: <http://www.registrar.arizona.edu/emailpolicy.htm>

Accessibility and Accommodations

At the University of Arizona, we strive to make learning experiences as accessible as possible. If you anticipate or experience barriers based on disability or pregnancy, please contact the Disability Resource Center (520-621-3268, <https://drc.arizona.edu/>) to establish reasonable accommodations.

Grievance Policy

Should a student feel he or she has been treated unfairly there are a number of resources available. With few exceptions, students should first attempt to resolve difficulties informally by bringing those concerns directly to the person responsible for the action, or with the student's graduate advisor, Assistant Dean for Student and Alumni Affairs, department head, or the immediate supervisor of the person responsible for the action. If the problem cannot be resolved informally, the student may file a formal grievance. Information can be found at: <http://deanofstudents.arizona.edu/policies-and-codes/code-academic-integrity>

University Final Grade Appeal Policy

<http://catalog.arizona.edu/2015-16/policies/gradappeal.htm>

Notice of Potentially Objectionable Materials

As this is a biology course, we will be discussing biological evolution in a scientific manner.

Confidentiality of Student Records

Family Educational Rights and Privacy Act of 1974 (FERPA) is the federal law that governs the rights of students and institutional responsibilities with respect to student records. FERPA is a federal law designed to protect the privacy of a student's educational record. More details on what FERPA is about and specifics of what constitutes an Education Record can be accessed at: <http://www.registrar.arizona.edu/ferpa/default.htm> . If you have any questions regarding any of the information provided on this site, please contact the University of Arizona Office of the Registrar via email: reghelp@email.arizona.edu.

Changes to this syllabus: The information contained in this syllabus, other than the grade and participation policies, may be subject to change with reasonable advance notice, as deemed appropriate by the instructor.