

BISP 194/BGGN 285 Advanced Topics in Modern Biology: Communicating Science Research Spring 2021 Syllabus

Course instructors: Joe Pogliano, jpogliano@ucsd.edu
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Class time: Tuesday 1-2:20 p.m. PST

Format: 100% synchronous

Grade options: Letter grade, P/NP
or S/U

Course units: 2.0

Office hours: By appointment

Course Description

Students will start the course with research they have conducted in another class or another setting. At the end of this course, students will give a formal presentation of this research. This course will focus on science communication and is designed to prepare students with skills to present scientific research in an industry setting. Discussion and assignment topics will cover broad areas such as soft skills and science communication, as well as specific topics such as storytelling, and verbal and nonverbal communication techniques. Students will learn effective communication skills from UC San Diego faculty and from participating industry professionals and hiring managers. Industry partners will be invited to participate in final presentations, where they can engage with students in a variety of ways, including providing feedback on student presentations and offering career perspectives.

Course Prerequisites

This course is for masters students or fourth-year undergraduates who have conducted science research. Students must have a research project of any kind (wet lab, bioinformatics or data science) that they can practice presenting during this course.

Course Expectations

1. It is strongly recommended, though not required, that students have their cameras on during class in order to engage with each other, course instructors and guest speakers.
2. It is strongly recommended, though not required, that students wear business professional attire to each class. This helps students make a strong first impression with the many industry professionals and hiring managers they will engage with throughout the quarter.
3. Come to class prepared to ask each guest speaker at least one question. Students can prepare questions by reviewing guest speakers' LinkedIn accounts or researching the discussion topic.

On completion of this course, students should be able to:

1. Share knowledge and communicate to individuals whose domain expertise spans across many disciplines, including biology, data science, and physical sciences.
2. Understand and implement STAR (Situation, Task, Action, Result) method and storytelling techniques into science research presentations.
3. Understand and implement verbal and nonverbal presentation methods to engage a broad audience.

Course Outline and Assignments

Date	Topic	Assignment
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Week 1 3/30/21	Syllabus overview, introductions, soft skills, email etiquette and LinkedIn.	Week 1 Discussion on Canvas and class participation/engage in in-class discussion.
Week 2 4/6/21	Soft skills panel with industry guest speakers below. Students will apply soft skills to work out workplace scenarios with industry professionals' support and feedback. Tommy Kojima , Sr. Biologics Account Specialist, GlaxoSmithKline Nicky Burbidge , Sr. Director, General Manager, Thermo Fisher Scientific Weiwei Tan , Senior Direct, Clinical Pharmacology Oncology, Pfizer	Class participation/engage in in-class discussion.
Week 3 4/13/21	Storytelling and STAR method (Situation, Task, Action, Result). Presentation by M. Hoon. Guest speaker: Sabrina Maisel , Senior Scientist, Pfizer	Class participation/engage in in-class discussion.
Week 4 4/20/21	Verbal and nonverbal presentation techniques. Presentation by M. Hoon. How to use PowerPoint to tell a compelling story. Presentation by J. Pogliano.	Class participation/engage in in-class discussion.
Week 5 4/27/21	Dr. Stanley Maloy , Associate Vice President for Research and Innovation, San Diego State University, will present his research and discuss the "behind-the-scenes" of developing his presentation, followed by Q&A with students.	Class participation/engage in in-class discussion. Practice Presentations.
Week 6 5/4/21	Dr. Karen Shaw , Independent Consultant, Hearts Consulting Group, will present her research and discuss the "behind-the-scenes" of developing her presentation, followed by Q&A with students.	Class participation/engage in in-class discussion. Practice Presentations.
Week 7 5/11/21	Publishing your research. Presentation by J. Pogliano.	Class participation/engage in in-class discussion. Practice Presentations.
Week 8 5/18/21	Dr. Aileen Rubio , Vice President, Research and Development, Morningside BioPharma Advisory, will present her research and discuss the "behind-the-scenes" of developing her presentation, followed by Q&A with students.	Class participation/engage in in-class discussion. Practice Presentations.

Week 9 5/25/21	Dr. Tony Ndifor , Director Preclinical Development and Safety, Johnson & Johnson, will present his research and discuss the “behind-the-scenes” of developing his presentation, followed by Q&A with students.	Class participation/engage in in-class discussion. Practice Presentations.
Week 10 6/1/21	How to communicate ideas, apply empathy and develop confidence to speak up in industry settings. Q&A discussion with Mihra Mahmood '19, Pathmaker Intern, Palomar Health.	Class participation/engage in in-class discussion. Practice Presentations.
Finals Week 6/11/21	Final presentations 6/11/21 at 11:30 a.m.-2:30 p.m. PST.	N/A
TOTAL POINTS		500

Assignments

Assignment	Due	Points
Week 1 Discussion	April 4 at 11:59 p.m. via Canvas	10
Practice Presentation	Several students present in class Weeks 5-10. Sign-up sheet will be distributed.	70
Participation and Attendance	Attend each class and participate in discussion and Q&A.	100
Final Presentation	June 11 at 11:30 a.m. in class	120
Thank you messages to guest speakers (5 points per message)	The Sunday after the guest speaker speaks. Submit screenshot on Canvas.	40
TOTAL		300

Final grades will be determined using the scale below. You can select whether you'd like a letter grade or P/NP via Webreg.

A = 93-100%
A- = 90-93%
B+ = 87-90%
B = 83-87%
B- = 80-83%
C+ = 77-80%

>210 points = Passing (P) Grade
<210 points = No Pass (NP) Grade

C = 73-77%
C- = 70-73%
D+ = 67-70%
D = 63-67%
D- = 60-63%
F = <60%

Class Effort and Conduct

Students will be evaluated on overall class performance, including participation in online class discussions, professional behavior towards other students, instructors and TA, coming to class prepared, and contributing to any collaborative team efforts. Everyone will start off with full credit, with points deducted at the discretion of the instructors and TA for consistently arriving late or leaving early, unexcused absences, and for failing to work well with classmates.

Class will be held asynchronously, beginning at 1 p.m. on Tuesdays as indicated in the schedule above. If you are unable to attend a class, please let the instructor and TA know before class, so that an alternate make up assignment can be given (such as an oral exam or writing assignment designed to show understanding of the material missed).

Academic Integrity

Cheating is not tolerated. Scientific research is completely dependent on the integrity and transparency of the scientists involved. All work should be your own. Words of presentations, interpretations, and notes should be your own words. The UCSD Office of Academic Integrity defines cheating as follows:

“Cheating occurs when a student attempts to get academic credit in a way that is *dishonest, disrespectful, irresponsible, untrustworthy or unfair.*”

All incidents of cheating will be reported to the Office of Academic Integrity. If you have any questions about academic integrity or cheating, please ask any of the instructors or your TA. When in doubt, ask first. We also encourage you to visit the website of the Office of Academic Integrity at UCSD: <http://academicintegrity.ucsd.edu>

Late Assignments

If you turn in an assignment late, you will automatically receive half the points at minimum.

Course Policy on Absences and Missed Assignments

If you cannot be in class, it is your responsibility to contact the instructor prior to class. It will then be determined by the instructor if a make-up assignment will be permitted.

Accommodations for Students with Disabilities

If you have a documented disability and anticipate needing accommodations in this course, please make arrangements to meet with the instructor as soon as possible. Please request that the Office for Students with Disabilities (OSD) send you an Authorization for Accommodation (AFA) letter verifying your disability. You will receive the appropriate accommodations from the day that you provide the course

instructor with the AFA letter. Course accommodations cannot be applied retroactively (e.g., after an examination).