

Scientific Communication Skills (CLRE-259) Winter 2019, 2 Units

Course instructor

Hemal H. Patel, PhD (hepatel@ucsd.edu), office hours scheduled as needed

Course TA(s)

Elizabeth Mariscal (emariscal@ucsd.edu)

Course Description

This course provides an introduction to written and oral scientific communications skills. Students will have the opportunity to work on writing skills throughout the quarter as well as participate in oral presentations to the class. The major forms of written scientific communication the student will learn about includes writing scientific abstracts, creating poster presentations for conferences, as well as learn the various aspects of preparing, submitting, and reviewing a scientific manuscripts and grant application. The course also covers the development of patent applications and regulatory filings for the FDA as well as insights into working with research regulatory committees involved in research (i.e., IRB, IACUC). The course culminated in a mock grant review study section.

Course Organization (Method of instruction)

The course included lectures, presentations and evaluations of peers, group activities, and discussion.

Course Goals

The overall goal of the course is to give the students a fundamental knowledge of writing basics, the ability to put these to practice in various aspects of scientific writing, and the ability to effectively communicate ideas in an oral format. The overarching goal of the course is to make student better and effective communicators.

Course Objectives

Learn to write concise and informative sentences; 2) apply this writing technique to abstracts and a longer writing assignments; 3) understand the basics of preparing, submitting and reviewing scientific manuscripts and grants; 4) learn to effectively communicate ideas orally; 4) prepare and deliver communicative slides for an oral presentation.

Prerequisites and Preparation

None required, come to class ready to participate and learn.

Course Materials/Resources

None required, Lectures and material needed for the individual classes will be posted on TritonEd.

Course Schedule

Provided as separate attachment

Course Component

- Written assignments (3 total)
- Two oral presentations
- In class group activities

Exams/Final projects

No exams

Grading Policy

- Letter grade: A+= >98; A = >93; A-= >87; B+= >83; B = >80; B-= >77; C+= >73; C = >70; C-= >67; D+= >63; F< 62.9
- Revisions to assignments are possible for a re-grade and must be arranged with the instructor
- Plagiarism will not be tolerated
- See your grades on TritonLink (if you are matriculated- in MAS Program), on MyExtension (if you are non-matriculated, concurrent enrollment)

Course Policy and Expectations (classroom rules of conduct)

- Attendance Policy: CREST/MAS program policy requires a minimal attendance of 70%, seven of the ten sessions. Please, be sure not to exceed 3 absences as you will have to drop and repeat the course. Coming to class 20 minutes after the class starts also counts as an absence so, please be on time.
- How do you handle technical devices? Do you have a cell phone or laptop policy? – devices are allowed in the classroom
- Academic Integrity (Plagiarism): <http://academicintegrity.ucsd.edu/>
- Late work submission policy – must be coordinated with the instructor before the due date

Communication with lecturers

The best way to reach us is via email. We will try to respond within 24 hours.

Student Evaluation of Course and Faculty

Course and faculty evaluations provide important feedback to instructors to improve course content and teaching methodology. Teaching evaluations are also an important factor in faculty advancement, merit and promotion. This is also part of developing professional conduct and behavior. To facilitate ease of completion of evaluations an electronic format has been implemented in Qualtrics. You will receive an email at the end of the quarter with the link to the questionnaire.

Technical Requirements

None required

Accommodations

If you have a disability that may impact your academic performance, you may request accommodations by submitting documentation to: <https://students.ucsd.edu/well-being/disability-services/>

SCHEDULE

Course: Scientific Communication, CLRE-259

Course Director/Main Instructor: Hemal H. Patel, PhD (hepatel@ucsd.edu)

Quarter: Winter, 2019

Class Time: Tuesdays, 4-6 pm

Class Location: UCSD Extension, University City Center

Lesson (Date)	Topic	Learning Objectives		Evaluation (Points)		Speaker
				Class Participation	Homework	
1/8/19	Course Overview Introduction to Written and Oral Communication	<ul style="list-style-type: none"> • Understand course objectives • Ethics and integrity in scientific research and communication • Types of scientific communication • Learn how to write clearly and succinctly 	1	N/A	Assignment #1; Revision of Sentences, due class time, 1/15/19; 20 points	Hemal Patel, PhD Darren Casteel, PhD
1/15/19	Oral Scientific Presentations	<ul style="list-style-type: none"> • Learn how to prepare a scientific talk 	2	N/A	Prepare for Oral Presentations	Charles Goldberg, MD Darren Casteel, PhD
1/22/19	Review of Assignment #1 In-class revision of abstract	<ul style="list-style-type: none"> • Learn how to improve scientific writing by direct practice 	3	Assignment #2; In-class abstract revision (5 points)	Assignment #3; 200 Word Abstract due class time, 1/29/19; 20 points Prepare for Oral Presentations	Hemal Patel, PhD Darren Casteel, PhD
1/29/19	Scientific Papers I Publishing Basics	<ul style="list-style-type: none"> • Learn how to write a scientific paper (components, organization, tools for simplifying figures, data, references, etc) • Types of journals, choosing the right journal • The editorial process 	4	Oral Presentations Ia (10 points)	Assignment #3 due Prepare for Oral Presentations	Hemal Patel, PhD Darren Casteel, PhD
2/5/19	Scientific Papers II; Abstracts and Posters	<ul style="list-style-type: none"> • Learn how to prepare an abstract and poster for a scientific meeting 	5	Oral Presentations Ib (10 points)	Prepare for Oral Presentations & Assignment #4	Hemal Patel, PhD Darren Casteel, PhD Brian Head, PhD
2/12/19	Patent Applications Investigational New Drug Applications	<ul style="list-style-type: none"> • Learn how to prepare a patent application • Learn how to prepare an FDA IND and other regulatory documents 	6	N/A	Assignment #4; 4 page document due 3/5/19; 30 points & Prepare for Oral Presentations	William Decker, PhD Keith Wilner, MD
2/19/19	Overview of Grants	<ul style="list-style-type: none"> • Structure of the NIH • Types of Grants • Other funding agencies (NSF, DoD, VA, Foundations, etc) 	7	Oral Presentations IIa (10 points)	Grant assigned for Mock Study Section & Prepare for Oral Presentations	Hemal Patel, PhD Darren Casteel, PhD Brian Head, PhD

Lesson (Date)	Topic	Learning Objectives		Evaluation (Points)		Speaker
				Class Participation	Homework	
2/26/19	Grant Writing	<ul style="list-style-type: none"> • Administrative vs scientific components of grants • The administrative pages (biosketches, budgets, forms, etc.) • The "Specific Aims Page" • Learn how to write the scientific portion of a grant 	8	Oral Presentaitons IIb (10 points)	Assignment #4	Hemal Patel, PhD Darren Casteel, PhD Brian Head, PhD
3/5/19	Animal and Human Subjects Sections of Grants How Grants Are Reviewed	<ul style="list-style-type: none"> • IACUC and IRB committees • Learn how to write the animal and human subjects section of a grant • Learn how grants are reviewed 	9		Assignment #4 Due	Al McCutchan, MD Hemal Patel, PhD Darren Casteel, PhD
3/12/19	Mock Study Section of Grant	<ul style="list-style-type: none"> • Learn how to review a grant, which helps in writing a grant 	10	Mock Study Participation (5 points)		Hemal Patel, PhD Darren Casteel, PhD
			TOTAL	30	70	