

Keck School of Medicine of USC

TRGN 599 Special Topics in Translational Biotechnology

Communicating Science: Writing

No. of Units: 1
Term: Fall 2018
Date/Time: Wednesday, 9:00 am – 9:55 am
Location: NRT 2508

Instructor: Llewellyn Cox, PhD
Office: NRT 2506
Office Hours: Wednesday 1 – 2 pm, or
by appointment
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Course Description

This course surveys the variety of written communication modalities for transmission of scientific information in the workplace. It covers internal and external communication skills necessary for successful careers in biomedical, healthcare, and related industries. This course covers both traditional and novel communication modalities. It discusses essential processes for the accurate transmission of scientific data to diverse stakeholders both within the enterprise and external to the scientific endeavor. Emphasis will be placed on the selection of key communication points, development of processes to package data for accurate dissemination, and optimization of communication strategies to ensure data is conveyed accurately and effectively.

Learning Objectives

The objective is for students to understand the range of communication modalities and their application to key areas of data dissemination in the workplace. This will involve reading of diverse source materials in addition to lectures. After completing the course, students will be able to:

- Research, compile, and deliver high-quality scientific reports to various audiences from across the spectrum of business, academia, and society.
- Identify key stakeholders for report deliverables and tailor reports effectively to the audience's specific interests.
- Understand the linguistic principles of writing for readers at various levels of scientific literacy; prepare reports that effectively communicate to a reader at their particular knowledge level without diminishing or "dumbing down" the underlying science.

Course Notes

One or more articles will be assigned for each class. Students should read the materials before attending class. In many cases, understanding of the methods and style of the articles will be reviewed in class, along with supplemental information and discussion.

Required Readings and Supplementary Materials

This course does not require the purchase of any textbooks. Required reading materials will be distributed in class.

Suggested Readings and Supplementary Materials

Additional suggested materials will be distributed in class. Below are resources that students are encouraged to refer to frequently.

- W.C. Booth, G. G. Colomb and J.M. Williams. *The Craft of Research*. University of Chicago Press. ISBN-13: 9780226065663
- V.E. McMillan. *Writing Papers in the Biological Sciences*. Bedford/St. Martin's. ISBN-13: 978-0312649715
- G. Gopen and J. Swan. *The Science of Scientific Writing*. *American Scientist*. *American Scientist*, 78: 550–58, 1990.
- W. Strunk, Jr. and E. B. White. *The Element of Style*. Pearson. ISBN: 020530902
- E.D. Johnson. *The Handbook of Good English*. Facts On File Inc. ISBN 0871961415
- B. Walsh. *Lapsing Into a Comma*. McGraw-Hill. ISBN: 0809225352

Description and Assessment of Assignments

Students are expected to participate actively in online and in-class discussions. Students will perform short projects to address each class's key area of focus. A short presentation of one or more of these projects will be at the end of the semester.

Grading Breakdown

- 75% Weekly projects, 5 projects total
- 10% Participation
- 15% Final assessment

Assignment Submission Policy

Unless otherwise specified, all assignments are to be submitted online. Late submissions incur grade penalties.

Course Website: Blackboard

Grading Rubric

	GOOD	OK	POOR	FAILED
Content	<ul style="list-style-type: none"> • Addresses all items required in the assignment. • Synthesizes information from multiple appropriate sources. • Central idea/thesis is clearly communicated. • Pays attention to context in which events occur. • Acknowledges potential contradictions, qualifications, or limits and pursues their logical implications. 	<ul style="list-style-type: none"> • Addresses most required items. • Draws information from several sources but may have missed some significant considerations. • Central idea/thesis exists but not clearly presented. • Pays attention to context most of the time. • Acknowledges the complexity of central idea and the possibility of other points of view. 	<ul style="list-style-type: none"> • Addresses only some required items and/or dwells on unrelated issues. • Draws information from limited number sources. • Contains ambiguous idea/thesis. • Discusses issues out of context. • Does not acknowledge other views. 	<ul style="list-style-type: none"> • Does not respond to the assignment. • Misunderstands or misuses sources. • Compartmentalizes information and makes no cross references. • Lacks central idea or thesis. • Discusses issues in a wrong context.
Organization	<ul style="list-style-type: none"> • Uses a logical structure to guide the audience through the chain of reasoning or progression of ideas. 	<ul style="list-style-type: none"> • Contains occasional lapses in logical presentation but retains clarity of central idea/thesis. 	<ul style="list-style-type: none"> • Lists ideas in loose structure that confuses the audience. 	<ul style="list-style-type: none"> • Ideas are presented in random order.
Supports	<ul style="list-style-type: none"> • Uses relevant information correctly and effectively to support central idea/thesis 	<ul style="list-style-type: none"> • Provides relevant information and generally uses information correctly, although not always effectively. 	<ul style="list-style-type: none"> • Provides relevant information but does not connect correctly to central idea/thesis. 	<ul style="list-style-type: none"> • Lacks supporting evidence or uses irrelevant, incorrect, unproven, or unverifiable data for support.
Mechanics	<ul style="list-style-type: none"> • Almost entirely free of spelling, punctuation, and grammatical errors. • Follows instruction correctly. • Presentation is professional and precise. 	<ul style="list-style-type: none"> • Contains some errors that annoy the audience but not impede understanding. • Uses colloquial phrases occasionally. 	<ul style="list-style-type: none"> • Contains errors that confuse the audience but not impede the overall understanding. • Presentation is generally vague or rambling. 	<ul style="list-style-type: none"> • Contains many errors that block the audience's understanding and ability to see connections between thoughts.

Course Schedule: A Weekly Breakdown

Each week, the specific audience, their scientific literacy level and expectation will be discussed. Examples of good and poor writing of the particular modalities will be presented. Students will practice writing the modality of that week using the subject area they choose during the first week of the semester. Writing assignments will be given each week, due the following week unless otherwise indicated. Students will choose no fewer than 5 different writing modalities for the semester: 2 mandatory and 3 elective. Final assessment consists of a writing portfolio that student assembled throughout the semester, including an executive summary and a reflective self-assessment.

Date	Topic and assignments
08/22	Introduction Assignment: Students will choose a specific scientific subject area for all their writing assignments.
08/29	Research Reports – Technical Summaries Assignment: 1-page technical summary of student’s chosen subject is due the following week. For all future weeks, writing assignment is due the following week.
09/05	Research Reports – Executive Summaries Assignment: 200-word executive summary
09/12	Research Reports – Marketing & Sales Assignment: Monthly marketing and sales report. Must include tables and diagrams.
09/19	Research Reports – Med. Science Liaisons & Medical Professional Education Assignment: Infographic materials for clinicians
09/26	Requesting \$ – Fed, State Agencies Assignment: Outline of an SBIR proposal
10/03	Requesting \$ – Foundations, Societies, & Philanthropy Assignment: Letter of Intent in response to a private foundation RFP
10/10	Requesting \$ – Investors, Lenders, and other capital markets Assignment: Introductory email correspondence, must include value proposition, and funding request
10/17	Investor Relations – research reports and updates Assignment: Monthly investor report with product updates and notable events
10/24	News & Views, & Research Reports for Journals Assignment: 1000-word News and Views (Nature Journals Style) article with one figure. This assignment is mandatory.
10/31	Science Journalism Assignment: 300-word Los Angeles Times breaking news article.
11/07	Press Releases, Blogs, & Corporate Communications Assignment: Blog entry in the Translational Biotechnology blog site. This assignment is mandatory.
11/14	Websites, FAQs, and Branding Assignment: Create a “Startup-Style” WordPress website
11/21	No Class. Thanksgiving
11/28	Project Presentations
12/10	Final Assessment. Portfolio, including an executive summary and a reflective self-assessment, is due on this date.

Statement on Academic Conduct and Support Systems

Academic Conduct:

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, “Behavior Violating University Standards” policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>.

Support Systems:

Student Counseling Services (SCS) – (213) 740-7711 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. engemannshc.usc.edu/counseling

National Suicide Prevention Lifeline – 1 (800) 273-8255

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. www.suicidepreventionlifeline.org

Relationship and Sexual Violence Prevention Services (RSVP) – (213) 740-4900 – 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. engemannshc.usc.edu/rsvp

Sexual Assault Resource Center

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: sarc.usc.edu

Office of Equity and Diversity (OED)/Title IX Compliance – (213) 740-5086

Works with faculty, staff, visitors, applicants, and students around issues of protected class. equity.usc.edu

Bias Assessment Response and Support

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. studentaffairs.usc.edu/bias-assessment-response-support

The Office of Disability Services and Programs

Provides certification for students with disabilities and helps arrange relevant accommodations. dsp.usc.edu

Student Support and Advocacy – (213) 821-4710

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. studentaffairs.usc.edu/ssa

Diversity at USC

Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. diversity.usc.edu

USC Emergency Information

Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible. emergency.usc.edu

USC Department of Public Safety – UPC: (213) 740-4321 – HSC: (323) 442-1000 – 24-hour emergency or to report a crime.

Provides overall safety to USC community. dps.usc.edu