Core Course on Scientific Exposition and Ethics
Course Syllabus

Course Faculty
Lead Instructors: Dave Jackson (lead)
Sydney Gary
Rebecca Leshan
Hannah Meyer


Guest Lectures: Onyinye Balogun, Melissa Davis, Susan Friedman, Jackie Jansen, Emanuel Moss, Kendra Sirak

Lectures:
Unless otherwise noted, the class will meet Monday or Wednesday mornings, 9:00 am to 11:30 am, and every Friday afternoon, 1:00-2:00 pm. In addition, students are required to attend the CSHL-wide seminars starting in October, which are given by visiting speakers on Thursdays at noon.

Sep 8, 2021, 1:00pm: Dave Jackson & Charla Lambert
- Introduction and Course Overview
- Writing I: Overview and General Principles

Sep 10, 2021: Charla Lambert
- Writing II: Abstracts

Sep 13, 2021: Sydney Gary, Dave Jackson, Justin Kinney, Saket Navlakha
- Writing III: Manuscripts
- Writing IV: Fellowships

Sep 17, 2021: Rebecca Leshan
- Writing V: Non-expert Audiences

Sep 20, 2021: Sydney Gary, John Inglis, Alyson Kass-Eisler
- Writing VI: Plagiarism
- Ethics I: Scientific Misconduct (Video)

Sep 24, 2021
- Writing Feedback Workshop

Sep 27, 2021: Hannah Meyer & Rebecca Leshan
- Writing VII: Figures
- Presenting I: Effective Presentations

Oct 1, 2021: Jackie Jansen
- Writing VIII: Editing and Feedback

Oct 4, 2021: Richard Sever
- Writing IX: Publishing Perspectives
- Writing Feedback: Draft II

Oct 8, 2021: Hannah Meyer
- Presenting II: Scientific Posters

Oct 13, 2021
- Student PowerPoint Presentations

- Ethics II: Rigor & Reproducibility (Video)

Oct 18, 2021
- Student Poster Presentations

Oct 22, 2021:
- Presenting III: Chalk Talks

Oct 25, 2021: Susan Friedman
- Ethics III: Innocence Project
Oct 29, 2021: Rachel Rubino & Jeremy Borniger
• Ethics IV: Animal Research

Nov 1, 2021:
• Student Chalk Talks

Nov 5, 2021: Dave Jackson
• Ethics V: Public Perception of Science - GMOs

Nov 8, 2021: Molly Gale Hammell & Charla Lambert
• Ethics VI: Gender + Racial/Ethnicity Bias

Nov 12, 2021: Diane Esposito & Tobias Janowitz
• Ethics VII: Human Subjects Research

Nov 15, 2021: Onyinye Balogun & Melissa Davis, Semir Beyaz
• Ethics VIII: Health Disparities

Nov 19, 2021:
• News & Views Feedback

Nov 22, 2021: Kendra Sirak & Adam Siepel
• Ethics IX: Genomic Ethics

Nov 29, 2021:
• Ethics X: Student Debates

Dec 03, 2021: Emanuel Moss
• Ethics XI: AI Ethics

Student Evaluation:
Evaluations will be pass/fail, based on:
• 50% active participation in class discussions
• 50% assignments:
  o Written assignments (4): Abstract, Personal Statement draft 1, Personal Statement draft 2, Lay Summary
  o Presentation assignments (3): Poster, Powerpoint Presentation 1, Powerpoint Presentation 2, Chalk Talk

Learning Objectives
Gain proficiency in:
• Fundamentals of modern scientific writing;
• Preparation and evaluation of written research products;
• Effective communication of research;
• Responsible conduct of research, including research involving animal and human subjects;
• Ethical issues related to science, specifically: data forensics, health disparities, biases in STEM workforces, scientific evidence in the criminal justice system, genomic ethics, GMOs, and ethical issues associated with AI.

Learning Outcomes
• Students will consider exposition and ethics as integral parts of scientific research;
• Students will be able to prepare and evaluate written research products, including abstracts, fellowships, manuscripts;
• Students will be able to effectively prepare and deliver research presentations via posters, slide presentations, chalk talks;
• Students will understand the fundamentals of research integrity, and their responsibilities in conducting scientific research;
• Students will be able to discuss ethical considerations of data forensics, biases in STEM workforces, debates surrounding genetically-modified organisms, scientific evidence in the criminal justice system, genomic ethics, and ethical issues associated with AI.

Reference Material
Textbooks:
• Gastel, Barbara. 2016. How to write and publish a scientific paper.
Supplemental reading:

- How to Edit Your Own Writing (NYTimes April 2020)

Discussion Papers

- Papers recommended from external speakers

Written assignments must be delivered electronically to the School Office, via email to Alyson (kasseisl@cshl.edu), by 12:00pm on the day they are due. All written assignments must be in Times 12-point, double spaced, with the student’s name and topic on the first page and a running footer with page number and date.