Responsible Conduct of Research program for Postdoctoral Scholars (RCR-PS) Course Syllabus

Office for Postdoctoral Scholars, UC San Francisco

Dates: Every Friday from February 17, 2023 – April 14, 2023 *(see below for details)*
Time: 10 AM - 12 PM PDT
Location: Zoom (each session will have a unique Zoom ID)

Program Director:
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Program Coordinator:
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The UCSF Responsible Conduct of Research Program for Postdoctoral Scholars (RCR-PS) is a thought-provoking, eight-session course designed to satisfy NIH and NSF requirements for training in the responsible conduct of research. The RCR-PS program utilizes a combination of formal presentations and case study discussions during each 2-hour session to address contemporary debates at the interface between biomedical science and society, with a unique emphasis on the postdoctoral training experience. With attention to the tools and resources requisite of successful, ethical research careers, postdocs will virtually meet with a community of UCSF faculty, staff, and postdocs to discuss issues such as:

- Societal implications of scientific misconduct
- Collaborative science: data management, sharing, and ownership
- Responsible authorship, publication, and peer review
- Biomedical research and human subjects
- Anti-Racism in health, science, and research
- Animal welfare in research
- Conflicts of interest and scientific entrepreneurship
- Mentor and mentee responsibilities and relationships

Overall Course Learning Objectives
Adapted from Dubois and Dueker's 2009 article "Teaching and Assessing the Responsible Conduct of Research: A Delphi Consensus Panel Report"
- To increase familiarity with US policies and regulations regarding biomedical research, including federal definitions, their limitations, and their development
- To foster research integrity, professionalism, and the ability to identify issues of ethics and justice in biomedical research
- To re/introduce resources at UCSF and beyond for topics and issues related to the responsible conduct of research

Is RCR-PS for me?

Am I eligible to take RCR-PS? This class is open to UCSF postdocs in a postdoctoral title code. If you have questions about your eligibility, please email the program coordinator at postdocs@ucsf.edu.

Am I required to take RCR-PS? Any UCSF postdoc who answers yes to any of the following questions should complete RCR-PS training:

- Is this your first year as a postdoc at UCSF?
- Are you funded by a T32, F32, or any other federal grant?
- Is your PI is funded by a federal grant, especially one from NIH or NSF?
- Has it been 4 or more years since your last RCR training?
- Are you interested in connecting with fellow UCSF postdocs?

The NIH requires that all postdocs complete it during their postdoctoral training at UCSF (just because your lab/research members say they didn't take it doesn't mean it isn't still required!). Please feel free to reach out to us if you have questions about your specific situation.

While there may be specific situations for which a postdoc may not be required to complete RCR-PS training, *we strongly suggest that all postdocs complete it during their postdoctoral training at UCSF* (just because your lab/research mates say they didn't take it doesn't mean it isn't still required)! Please feel free to reach out to us if you have questions about your specific situation.

Schedule of Classes

Date	Session Title	Class Facilitators
Session 1 Friday /17/2023 10 AM – 12 PM	Societal Implications of Scientific Misconduct	Tony DeFranco, PhD Mark Ansel, PhD
Session 2 Friday 2/24/2023 10 AM – 12 PM	Collaborative science: data management, sharing, and ownership	Ariel Deardorff, MLIS
Session 3 Friday 3/3/2023 10 AM – 12 PM	Responsible Authorship, Publishing, and Peer Review	Annelise Taylor, MLIS Michael McManus, PhD
Session 4 Friday 3/10/2023 10 AM – 12 PM	Biomedical Research and Human Subjects	Mercedes Paredes, MD, PhD Elizabeth Crouch, MD, PhD
Session 5 Friday 3/17/2023 10 AM – 12 PM	Anti-Racism in Science, Health, and Research	Tung Nguyen, MD
Session 6 Friday 3/24/2023 10 AM – 12 PM	Animal Welfare in Research	Gina Alvino, PhD Juan Antonio Camara Serrano, DVM, PhD
OFF WEEK		
Session 7 Friday 4/7/2023 10 AM – 12 PM	Conflicts of Interest: Who Owns My Research?	Farida Lada, PhD Ivana Neff
Session 8 Friday 4/14/2023 10 AM – 12 PM	The Art of Mentorship	Naledi Saul, MPM

Class Requirements and Logistics

The RCR-PS 2023 is comprised of eight weekly sessions. We are required to maintain an accurate record of RCR training for compliance and to generate Course Completion letters. Therefore, we require every **postdoc to do the following for *each class (no exceptions)*:**

- Log into CLE and join the Zoom from the link listed under that week's session.
- Listen carefully, speak up in class discussions, allow others to express their perspectives
- Engage before, during, and after class on CLE
- At the end of each class, we will send a session-specific Evaluation Survey to your UCSF email; this is a unique survey link and should not be shared with others.
- **You will have until the following Monday at 5pm PDT to complete the evaluation survey.**
- If you do not complete the evaluation survey, we will record you as absent for the class; no exceptions.

Should you miss any class, listed below are the options available to you*:*

<u>Option #1: Absent for ONE session</u>

If a participant must miss one session, they may still get credit for the full course by submitting a case study analysis as described below. For example, if a participant attends seven sessions and submits a case study analysis for the eighth, they can still receive a "course completion letter." *If the participant misses one session and does not submit a case study analysis or misses multiple sessions, option #2 will apply.*

Case Study Analysis (only as make-up for one missed session)

If you miss a session, you will have the opportunity to fulfill the course deliverables and advance your understanding of the material by producing a case study analysis, thereby critically evaluating the topic and the case studies discussed in class as they relate to your own research experience. The case study analysis should include a critical discussion of the case studies, lecture materials, readings, and a reflection on the relevance of the case studies for your own research.
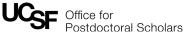
Format Requirements:

- 1-2 pages; double spaced; one-inch margins; name; title of missed session
- Word document saved as "*LastName.FirstName.CSA2023*"
- Original work; citations should be consistent but do not need to be in a specific format

Due: Wednesday, April 19th, 2023 at 11:59pm PDT – BY EMAIL TO postdocs@ucsf.edu

<u>Option #2: Absent for MORE THAN ONE session</u>

If the participant can only attend a few of the sessions, we will issue a letter listing the individual sessions attended. For example, if a participant only attends three sessions, their letter will verify completion of those three, specific topics. The letter will not state that the participant "failed" or "did not complete" RCR training. It will simply confirm the specific training completed for a subset of the topics that NIH suggests is acceptable. If the NIH grant program officer asks for verification of a participant's RCR training activity, the participant will be able to present this letter for some of the NIH requested topics.

The Office for Postdoctoral Scholars cannot guarantee that partial participation in RCR-PS shall be deemed sufficient by your Program Officer or federal grant agency.

Detailed Program Schedule and Class-Specific Learning Objectives

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Session 1: Societal Implications of Scientific Misconduct
Facilitators: Mark Ansel, PhD, Tony Defranco, PhD

This session addresses societal implications of scientific misconduct and concerns around ethics and justice. Training in this topic also addresses ethical issues involved in the development and dissemination of scientific research findings and how to report occurrences of scientific misconduct.

Session specific learning objectives:
- Review and understand the NIH's definition of Research Misconduct; to understand the responsibilities of scientists to report possible Research Misconduct if there is good reason to think it has occurred; and to be aware of institutional procedures for reporting suspected Research Misconduct at UCSF. To aid in these Objectives, lessons that can be derived from actual cases of Research Misconduct will be discussed
- Review and discuss evolving efforts within the scientific community and by key stakeholders (funding agencies, scientific journals, etc.) to address suboptimal research practices that may reduce the reliability of research results and impede scientific progress
- Discuss whether the NIH definitions and protocols are adequate to foster justice in scientific research.

Session 2: Collaborative Science: Data Management, Sharing, and Ownership
Facilitator: Ariel Deardorff, MLIS

The data management topic covers accepted practices and procedures for acquiring, storing, organizing, documenting, analyzing, sharing and maintaining data. The goal is to provide researchers with the tools and skills they need to integrate data management into their research workflow. Learn how to write a data management plan, comply with funder and journal requirements for data sharing, and organize your projects for reproducibility.

Session specific learning objectives:
- Write a data management plan for your research project that addresses data collection and classification; data organization and documentation; secure data storage; and data sharing, de-identification, and preservation
- Identify and utilize relevant UCSF resources and contacts to meet data collection, privacy, security, and sharing requirements for your research
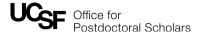

Session 3: Responsible Authorship, Publishing, and Peer Review
Facilitator: Anneliese Taylor, MLIS, Michael McManus, PhD

This topic examines the responsibilities of authors in scientific publication. The class will cover guidelines for assigning credit and authorship, author roles, and how to address authorship issues and disputes. Resources will be provided for participants to consult regarding authorship, peer review responsibilities, and other scholarly communication topics.

Session specific learning objective:
- Define criteria and guidelines for authorship and peer review in scholarly publications

- Recognize dilemmas that can arise in determining authorship
- Identify professional and ethical issues surrounding authorship and publishing decisions
- Identify strategies and resources to help with authorship and publishing ethics decisions

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Session 4: Biomedical Research and Human Subjects
Facilitator: Mercedes Paredes, MD, PhD, Elizabeth Crouch, MD, PhD

This session addresses complex issues pertaining to biomedical research and human subjects' protections, including privacy, confidentiality, and protection of human tissue donors. The development of U.S federal policies and practices are discussed from a sociohistorical perspective and linked to contemporary issues, such as the inclusion of vulnerable populations and the ownership of research products. Related topics such consent and disclosure and methodology issues are also introduced.

Session specific learning objectives:
- Reflect on the variety of ethical considerations that arise when humans are involved in the material aspects of biomedical research, including the use of living human subjects and human biological materials
- Examine the social and historical complexities surrounding the development of policies and practices related to the theme of "human subjects in research"

Session 5: Anti-Racism in Science, Health, and Research
Facilitator: Tung Nguyen, MD

This session provides a brief background of systemic racism in scientific research. It explores the relationships between race, science, ethics, and equity. The session will also provisionally define "anti-racism" and related concepts, principles, and actions using examples from work done at UCSF. Class participants will engage in a discussion on what it means to do anti-racist work as a scientist, and class discussion notes will contribute to the anti-racist work being done at UCSF.
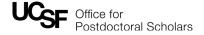
Session specific learning objectives:

- Identify specific historical examples of racism in science, research, and health.
- Describe the ways in which racism works in science, research, and health.
- Start or continue on the path of an anti-racist approach to science, research, and health through an understanding of basic concepts, principles, and actions.

Session 6: Animal Welfare in Research
Facilitators: Gina Alvino, PhD, Juan Antonio Camara Serrano, DVM, PhD

This session addresses issues important in the use of animals in conducting research. Includes topics such as definition of research involving animals, ethical principles for conducting research on animals, federal regulations governing animal research, institutional animal care and use committees, and treatment of animals.

Session specific learning objectives:

- Understand the importance of proper animal welfare practices in research and to understand why positive animal welfare equates to quality science.
- Provide a framework for how to practically implement good animal welfare practices in a research lab.
- Familiarize the audience with regulations governing ethical use of animals in research (resulting from noteworthy legal cases) and to provide relevant resources on these guidelines

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Session 7: Conflicts of Interest: Who Owns My Research?
Facilitators: Farida Lada, PhD, Ivana Neff

This session addresses conflicts of interest (COI) at the university-industry interface. A COI exists when two or more contradictory interests relate to an activity by an individual or an institution. A COI in research exists when "the individual has interests in the outcome of the research that may lead to a personal advantage and that might therefore, in actuality or appearance compromise the integrity of the research." NAS, Integrity in Scientific Research.

Session specific learning objectives:
- Increase the ability to identify and manage COI in research
- Identify stakeholders, distinguish their interests, and create plans for problem-solving in the context of scientific entrepreneurship
- Identify issues of power and justice within COIs and create plans to address them.

Session 8: The Art of Mentorship
Facilitators: Naledi Saul, MPM

This session highlights the unique opportunity for postdocs to both give and receive mentorship, emphasizing research team and lab dynamics that incorporate the presence of PIs, senior researchers, and graduate students. Skill-building activities around negotiation, mediation, and decision-making will be included, coupled with examples of the role of mentorship in scientific achievement and career direction.

Session specific learning objectives:
- Identify power structures and hierarchical relationships within science and related mentoring relationships
- Identify and practice skills that optimize the giving and receiving of mentorship within the UCSF scientific community

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Statement on Accommodation
UCSF is committed to making its facilities, activities and events accessible. To request accommodations for this activity or event, please contact the program coordinator at postdocs@ucsf.edu at least 1 week before the next class or contact Disability Management. In compliance with Education Code Section 92640(a), participants may arrange to turn in course deliverables at a time that does not conflict with their religious observances.