University of California Santa Barbara
National Science Foundation Responsible & Ethical Conduct of Research
Training Plan

I. **INTRODUCTION**

Under the America COMPETES Act of 2007, as amended, the National Science Foundation (NSF) requires that institutions applying for financial assistance for science and engineering research or education include a plan in their grant proposals to provide appropriate training and oversight in the responsible and ethical conduct of research. This requirement applies to undergraduate students, graduate students, postdoctoral researchers, faculty, and other senior personnel who will be supported by the proposed research project.

In order to meet this requirement, the training plan must include mentor training and mentorship, in addition to training for other members of the research team. The goal of this training is to ensure that all personnel involved in the research project are fully equipped to conduct research in an ethical and responsible manner.

As such, it is imperative that institutions develop comprehensive training plans that meet the requirements of the America COMPETES Act, and that these plans are incorporated into grant proposals to the NSF. By doing so, institutions can help to promote responsible and ethical research practices, and ensure that all members of the research team are adequately trained and supported throughout the research process.

II. **PURPOSE**

This document aims to outline UC Santa Barbara's strategy for implementing the NSF's responsible and ethical conduct of research training requirements. The Office of Research has developed the following plan for training as described in Sections III-V below.

III. GENERAL STANDARDS

The University of California, Santa Barbara expects all members of its community to adhere to the *Standard of Ethical Conduct* adopted by the UC Regents. Additionally, individuals engaged in research activities at UCSB are expected to conduct their work with integrity and intellectual honesty at all times.

Education in responsible and ethical conduct of research is essential for preparing scientists and engineers to maintain excellence and public trust in their fields. As such, faculty members serve a crucial role as mentors in shaping the next generation of researchers and are expected to instill high ethical standards in their students and postdoctoral researchers.

At UCSB, the Responsible & Ethical Conduct of Research (RCR) training program is based on the core elements as identified by the National Science Foundation and the National Institutes of Health Office of Research Integrity. The training includes instruction in these essential components:

1. Research Misconduct
2. Conflict of Interest and Conflict of Commitment
3. Human Subjects Protections
4. Use and Care of Animals
5. Data Acquisition, Management, Sharing, and Ownership
6. Publication Policies and Responsible Authorship
7. Mentor Training and Mentorship - *required by NSF*
8. Peer Review
9. Collaborative Science
10. The Scientist as a Responsible Member of Society

IV. Training Plan
A. Training Requirements
All individuals paid from an NSF grant for research purposes, must complete the training requirements. This includes **undergraduate, graduate, postdoctoral students, faculty and other senior personnel**. The requirements for training are listed below:

1. Training must be completed within 60 days of being paid from the grant. Training can be documented by completing the applicable *Responsible Conduct of Research* ethics course available from CITIprogram.
2. Links to the training and instructions for logging into CITIprogram can be found on the Office of Research Responsible Conduct of Research web page: https://www.research.ucsb.edu/research-integrity/rcr
3. Online refresher training must be completed once every 5

years while being paid from NSF to conduct research.

Additionally, faculty are encouraged to provide ongoing instruction in the responsible and ethical conduct of research between the trainees, fellows, scholars, or participants and the participating faculty. NSF requires the inclusion of mentor training and mentorship for proposals submitted on or after July 31, 2023. Faculty-led instruction is a critical component of providing effective mentorship and mentor training. This additional training may involve a combination of didactic and small-group discussions, such as case studies and active learning, or the inclusion of research ethics & integrity topics at lab group meetings.

B. **Roles and Responsibilities**
The PI is responsible for ensuring all research personnel have been appropriately trained in the responsible and ethical conduct of research, including completion of CITIprogram training.

The Office of Research, Research Integrity Office has access to CITIprogram training records and will be responsible for oversight of compliance by tracking and verifying completion that the training requirement has been met.

C. **Failure to Complete Required Training**
Failure to complete the required training in a timely manner may have serious consequences, including potential sanctions from NSF and the potential impact on future funding opportunities, and the potential for holding awards until outstanding training is completed. It is essential to prioritize and promptly fulfill the training requirements to maintain compliance and maximize future research prospects.

V. **Transferring RCR Training Between Institutions**
UC Santa Barbara only accepts transfers of RCR training records from CITIprogram courses completed within the past year that meet the 2023 NSF content requirements, and the individual's RCR course work must be affiliated with UCSB in order to be accepted. Non-CITIprogram training records from other institutions can not be accepted.

VI. **Resources**
[CITIprogram Training](#)
[NSF Implementation Guidance](#)
[NSF RCR Frequently Asked Questions](#)
[Center for the Improvement of Mentored Experience in Research](#)
[National Research Mentoring Network](#)
[Mentor First](#)
[Labs That Work for Everyone](#)

VII.   Update History

July 21, 2023 - Updates to comply with new NSF RECR requirements. Audience extended to faculty and other senior personnel, mentor training and mentorship are required elements.