UNIVERSITY OF CALIFORNIA
UC RIVERSIDE

INSTITUTIONAL PLAN TO MEET FEDERAL REQUIREMENTS FOR TRAINING AND OVERSIGHT IN THE RESPONSIBLE AND ETHICAL CONDUCT OF RESEARCH

Developed by

Research and Economic Development in consultation with the

Vice Provost and Dean of Graduate Studies

Revised May 14, 2026

Responsible and Ethical Conduct of Research (RECR) Training Plan

1 Background and Rationale

An understanding of the issues concerning the conduct of scientific and scholarly research in an increasingly complex world has become critical in successfully navigating the research landscape. Intentional education in how to conduct research responsibly and with integrity is essential to the preparation of future researchers, scholars and professionals.

To help prepare University of California Riverside graduate students and post-doctoral scholars for their future research and scholarship, and to ensure that faculty are prepared to support their students, a plan for providing the foundation of responsible and ethical conduct has been developed by the Vice Chancellor for Research & Economic Development in consultation with the Vice Provost and Dean of Graduate Studies.

The plan is predicated on the belief that an understanding of the ethical dimensions of practices which are fundamental to scientific and scholarly research is a necessary starting point, and such understanding is attainable through both basic didactic training and reinforcement through more advanced discussion. It is the belief that this plan will provide a foundation for all graduate students as well as others pursuing a career in research.

While we understand that the primary responsibility for adhering to professional standards lies with the individual scholar, it is also the responsibility of advisors, faculty, and of the disciplinary community at large.

2 Requirements of Funding Agencies:

The National Science Foundation (NSF), the National Institutes of Health (NIH), and the USDA National Institute of Food and Agriculture (NIFA) have requirements for training and education in the Responsible and Ethical Conduct of Research (RECR).

2.1 NSF

Effective July 31st, 2023, “an institution must have a plan in place to provide appropriate training and oversight in the responsible and ethical conduct of research to undergraduate students, graduate students, postdoctoral researchers, faculty, and other senior/key personnel who will be supported by NSF to conduct research. Such training must include mentor training and mentorship.” Further guidance can be found at: https://new.nsf.gov/policies/pappg/24-1/ch-9-recipient-standards#b-responsible-and-ethical-conduct-of-research-recr-9c7

For faculty and personnel on NSF funds, the requirement for RECR training requirement can be met by the plan outlined in Section 3.

2.2 NIH

Effective as of 2022, "...any NIH training, career development award (individual or institutional), research education grant, and dissertation research grant must receive instruction in responsible conduct of research [RCR]." Proposals and renewals in the following programs must address the training plan for instruction in RCR: D43, D71, F05, F30, F31, F32, F33, F34, F37, F38, K01, K02, K05, K07, K08, K12, K18, K22, K23, K24, K25, K26, K30, K99/R00, KL1, KL2, R25, R36, T15, T32, T34, T35, T36, T37, T90/R90, TL1, TU2, and U2R. In addition, the policy also applies to any other NIH-funded programs supporting research training, career development, or research education that require instruction in responsible conduct of research as stated in the relevant funding opportunity announcements.

Students and postdoctoral scholars funded through the above designated NIH support mechanisms will be required to take the RECR CITI training content outlined in Section 3.3. In addition, ***they are required to complete at least eight hours of in person training, with faculty who are part of the research training grant***, as per the NIH update. This in-person training can be obtained in a variety of ways and may be available through existing courses and within the research setting; likewise, training may be offered within a specific center, laboratory, department and/or college (see Section 3.5 and 3.6 for examples).

More information on the NIH RCR training requirements published February 17th, 2022 can be found at https://grants.nih.gov/grants/guide/notice-files/NOT-OD-22-055.html.

2.3 NIFA/USDA

Effective for awards subject to the February 2013 Research Terms and Conditions (and those issued subsequently), the U.S. Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA) has mandated that program directors, faculty, undergraduate students, graduate students, postdoctoral researchers, and any staff participating in the research project receive appropriate training and oversight in the responsible and ethical conduct of research. The general content of the ethics training will, at a minimum, emphasize three key areas of research ethics: authorship and plagiarism, data and research integration, and reporting misconduct, and should include topics such as Data Acquisition and Management - collection, accuracy, security, access; Authorship and Publication; Peer Review; Mentor/Trainee Responsibilities; Collaboration; Conflict of Interest; Research Misconduct; Human Subject Research; and Use of Animals in Research.

Most of the NIFA RECR training requirements can be met by the plan outlined in Section 3. However, NIFA also requires training in how to report research misconduct. As this is not met through the CITI training modules, program directors, faculty, undergraduate students and staff on NIFA funds should review the information at https://research.ucr.edu/orc/rm or contact RED for more information.

3 UNIVERSITY OF CALIFORNIA, RIVERSIDE (UCR) PLAN FOR TRAINING IN RESPONSIBLE AND ETHICAL CONDUCT OF RESEARCH

3.1 UNIVERSITY-LEVEL REQUIREMENTS

Responsible and Ethical Conduct of Research training is strongly encouraged for all students, postdoctoral fellows, faculty, and staff, irrespective of the funding source. The plan below represents the university baseline upon which schools and faculty are encouraged to build upon to strengthen the RECR culture on this campus.

3.2 GENERAL TRAINING OBJECTIVES

The terminal objective is to enhance scientific integrity by training the learner in the accepted standards and norms of science. The objectives of RECR training are as follows:

- Increase awareness of ethical dimensions of research/scholarship;
- Develop and refine the skills needed to question, analyze, and resolve ethical dilemmas;
- Learn relevant legal, institutional and professional standards;
- Know where to access various campus, national and internet resources that address ethical and responsible research practices; and
- Facilitate discourse with peers and with faculty about ethical dimensions of research within their discipline.

3.3 CITI TRAINING CONTENT

The didactic training will be delivered through the following RECR CITI modules:

- Introduction to RCR
- Authorship
- Collaborative Research
- Conflicts of Interest and Commitment
- Research Misconduct
- Peer Review
- Data Management
- Mentoring and Healthy Research Environments
- Presentation of Research Findings
- Plagiarism

Additional content, depending on the needs of the trainee and relevance to the discipline or project, is encouraged, and may also be required by the funders (see Section 2).

3.4 TRAINING AUDIENCE

This plan covers undergraduate students, graduate students, post-doctoral researchers, staff and faculty who are required to complete RECR didactic training.

3.4.1 Undergraduate Students

All undergraduate students on NIH, NSF or NIFA/USDA awards (as defined in Sections 2.1-2.3) are required to complete the CITI online modules outlined in Section 3.3 within 90 days of beginning work on the project.

3.4.2 Graduate Students

All graduate students on NIH, NSF or NIFA/USDA awards (as defined in Sections 2.1-2.3) are required to complete the CITI online modules outlined in Section 3.3 within 90 days of beginning work on the project.

3.4.3 Post-doctoral Scholars

All post-doctoral scholars on NIH, NSF or NIFA/USDA awards (as defined in Sections 2.1-2.3) are required to complete the CITI online modules outlined in Section 3.3 within 90 days of beginning work on the project.

3.4.4 Faculty

All faculty who on NSF or NIFA/USDA awards (as defined in Sections 2.2-2.3) are required to complete the CITI online modules outlined in Section 3.3 within 90 days of beginning work on the project.

3.4.5 Staff

All staff who are on NIFA/USDA awards (as defined in Sections 2.3) are required to complete the CITI online modules outlined in Section 3.3 within 90 days of beginning work on the project.

3.5 IN PERSON TRAINING

Online training is important, but not sufficient, and supplementary in-person education offered by faculty members is encouraged. Though not required by all sponsors, faculty are encouraged to have face-to-face discussion-based training with their students and post-doctoral scholars. This can be provided as discussions in journal clubs, brown bag lunches, seminar series in the department or elsewhere on campus. They can also be conversations integrated into professional development courses in ways that make sense to the content of the course.

For guidance on developing RCR education, please visit the DHHS Office of Research Integrity, Resources for Research Ethics Education, and the Online Ethics Center for Engineering and Science.

3.6 OTHER RECR TRAINING OPPORTUNITIES

3.6.1 Animal/human research subjects and Biosafety

Training in animal/human research subjects protection and biosafety will be provided by the Institutional Animal Care and Use Committee (IACUC), Institutional Review Board (IRB), and Institutional Biosafety Committee (IBC) respectively.

3.6.2 Department/College level opportunities

- Courses offered by the department that include coverage of topics associated with RECR
- Departmental meetings
- Laboratory or center journal club and research meetings
- Seminar series and discussion groups
- Professional association communications

If any of these methods are used to satisfy the additional RECR training requirements, appropriate documentation must be maintained by both the PI and student and be available upon request of RED, the Graduate Division, or the sponsor.

3.6.3 Prior training

RECR CITI training obtained from another institution within the past 18 months is acceptable to fulfill the CITI requirement for faculty, post-doctoral scholars and students. Contact RED for verification of the comparable training. Training completion and verification documents should be submitted to the project's faculty supervisor who is responsible for maintaining the records.

3.7 REFRESHER TRAINING

Refresher training through CITI is required every four years.

3.8 NONCOMPLIANCE

Every participant on federal awards specified above must complete the required training within 90 days of beginning work on the project and/or being paid from the award. Noncompliance may result in a delay in the release of funds as failure to complete the required training would be a violation of UCR's assurance of compliance with the federal government, a violation of federal law, and could jeopardize all research funding to the campus. Noncompliance could result in a termination of the award.

3.9 RESPONSIBILITIES

3.9.1 RED

RED will maintain the RECR training plan, identify sponsored awards that are subject to the federal requirements, and notify PIs and other researchers of such requirements.

3.9.2 Graduate Division

The Graduate Division may be able to suggest options for meeting the requirements for training and education in RECR; identify resources necessary for providing training in responsible and ethical research practices; and work with departments/colleges/faculty to identify and/or create program and discipline-specific research ethics resources/materials that meet the needs of their trainees.

3.9.3 Faculty/Principal Investigators

Faculty/Principal Investigators are responsible for:

- Creating and promoting a responsible and ethical conduct of research environment within the research group, including, if appropriate, providing such training for one's trainees.
- Verifying that trainees have completed baseline RECR training requirements as described in this plan.
- Actively working with student(s) and postdoctoral scholars to find appropriate additional RECR training, depending on discipline and career stage.
- Documenting additional RECR training received, and providing such documentation to RED, Graduate Division or the sponsor upon request.

3.9.4 Trainees

Trainees are responsible for:

- Accessing and completing required RECR training and retaining a copy of documentation of training.
- Actively working with the faculty mentor to find appropriate additional RECR training for discipline and career stage.

3.10 RECR Plan Assessment

The primary objective is to enhance scientific and research integrity by training scholars in the accepted standards and norms of science. RECR training is intended to promote awareness and understanding of conventions within and across disciplines. The RECR training plan will be assessed periodically by RED.