



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 Research Ethics Education Program of the Graduate Division

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# Responsible Conduct of Research Training Plan

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## 1. Background and Rationale

Training in responsible and ethical research practices is an integral part of professional development, and preparing academic professionals to conduct research.

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 Conduct of Research (RCR).

*NSF*: Effective January 4, 2010, proposals submitted to NSF must include certification from the institutional official that “*the institution has a plan to provide appropriate training and oversight in the responsible and ethical conduct of research to undergraduates, graduate students, and postdoctoral researchers supported by NSF to conduct research.*”

Federal Register Notice announcing NSF’s final implementation published on August 20, 2009, can be found here:  
<http://edocket.access.gpo.gov/2009/E9-19930.htm>

*NIH*: Effective January 25, 2010 “...*any NIH training, career development award (individual or institutional), research education grant, and dissertation research grant must receive instruction in responsible conduct of research.*” These are listed as: 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 proposals and renewals must address the training plan for instruction in RCR.

NIH RCR training requirement policy update published on November 24, 2009, can be found here:

<http://grants.nih.gov/grants/guide/notice-files/NOT-OD-10-019.html>

*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 (RCR).***

## **2. University of California, Riverside (UCR) Policy for Training in Responsible Conduct of Research**

UCR supports training to ensure the highest ethical and professional standards for conducting research. RCR training is intended to promote awareness of principles and practices that facilitate ethical and responsible research across all areas of research and scholarship. Research and Economic Development (RED) developed this plan in consultation with the Research Ethics Education Program (REEP) in the Graduate Division [this program offers several options for meeting the requirement for training and education in RCR for graduate students, post-docs, and faculty]. The plan's flexibility permits training to be appropriate for the discipline and career stage.

### **3. Training Plan**

This working document describes the plan developed by UCR to meet the requirements for training in RCR. At this time, only those individuals required to receive training must comply with the training plan; however, all students, staff and faculty engaged in research are strongly encouraged to receive appropriate training.

#### **3.1 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 RCR training are as follows:

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

#### **3.2 Training Content**

RCR training generally includes coverage of the following topics, though this list is not meant to be exhaustive nor comprehensive:

Research Misconduct (Fabrication, Falsification, Plagiarism)  
Research Subject Protection (animal and/or human)  
Conflict of Interest  
Collaboration  
Data Management  
Mentoring  
Peer Review  
Authorship  
Publication  
Biosafety/security  
Whistleblowing

UCR's plan for training in RCR includes most, if not all, of these topics; however, content may vary depending on the needs of the trainee and relevance to the discipline or project.

### **3.3 Training audience**

As noted above, some undergraduate and graduate students, post-doctoral researchers and faculty are required to complete training depending on stipulations from the funding agency. However, any individual (i.e. student, post-doctoral fellow, staff, faculty) engaged in research is eligible and is strongly encouraged to complete RCR training.

### **3.4 Training Options**

**NSF:** Undergraduate students supported on NSF funds are required to complete the RCR primer found here: [http://research.ucr.edu/media/4665/ucr - rcr handout for undergrads.pdf](http://research.ucr.edu/media/4665/ucr-r-cr-handout-for-undergrads.pdf).

All graduate and postdoctoral trainees on NSF funds will complete a web-based program on Responsible Conduct of Research at <http://research.ucr.edu/ori/rcr/rcr-training/rcr-citi.aspx> as soon as possible after beginning work on the project.

Completion of this on-line training will meet the minimum training requirement for all trainees, and will be considered sufficient training for those on funds for less than 90 days.

Graduate students and post-doctoral researchers who receive NSF support for more than 90 days total are encouraged to complete additional RCR training in addition to the web-based tutorial.

**NIH:** Those funded through designated NIH support are required to complete at least eight hours of in person training 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. The Research Ethics Education Program in the Graduate Division is developing a resource list of lectures, workshops, and courses that are available for RCR training.

**USDA/NIFA: All program directors, faculty, undergraduate students, graduate students, postdoctoral researchers, and any staff** participating in NIFA-funded research projects will complete a web-based program on Responsible Conduct of Research at <http://research.ucr.edu/ori/rcr/rcr-training/rcr-citi.aspx> as soon as possible after beginning work on the project.

Completion of this on-line training will meet the minimum training requirement for those supported on these funds.

The faculty supervisor is responsible for ensuring that eligible trainees receive training within a year of the project's start. An RCR training website is being developed, for deployment in Fiscal Year 16/17, to assist in documenting training.

If human subjects, animal subjects or biohazardous materials will be used, the trainee must also complete training through the Human Research Review Board tutorial (<http://research.ucr.edu/OrApps/RI/Training/Tutorial/Default.aspx>) or the Animal Care and Use tutorial and/or the biosafety training ([http://research.ucr.edu/ori/committees/iacuc.aspx#Required Training](http://research.ucr.edu/ori/committees/iacuc.aspx#RequiredTraining)) provided through UCR's Office of Research Integrity. Training must be completed in advance of working with human or animal subjects or biohazardous materials.

RCR training opportunities:

a. University level

- Beginning Fall 2016, the REEP in the Graduate Division will offer a 1-unit seminar in research and scholarship ethics for graduate students and post-docs every other quarter, providing documentation of successful completion. Students who successfully complete this course do not necessarily need to also complete the on-line training; individual program requirements may vary.
- The REEP in the Graduate Division can also offer other training as appropriate, and will provide documentation of such.
- The REEP in the Graduate Division is coordinating and developing an RCR web page that will include a resource list of lectures, workshops, and courses available for RCR training.
- 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.

b. Department/College level

- Courses offered by the department that include coverage of topics associated with RCR (to be included in the master list compiled by the Research Ethics Education Program)
- 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 training requirements, appropriate documentation should be maintained and be available upon request of RED. A copy of the documentation must be kept by both the PI and the student in the event of any review of training provided.

c. Supplementary Education

Supplementary education may be offered by the faculty member. For guidance on developing RCR education, please contact the Director of the Research Ethics Education Program, and/or visit the [DHHS Office of Research Integrity](#), [Resources for Research Ethics Education](#), [Online Ethics Center](#) and [Ethics in Science and Engineering National Clearing House](#).

### **3.5 Prior training**

RCR training obtained from another institution within the past 18 months is acceptable; verification of training completion should be submitted to the project's faculty supervisor who will be responsible for maintaining the verification documents and forwarding on to RED, as requested.

#### 4. Responsibilities

- a) RED will maintain the RCR training plan, will identify sponsored awards that are subject to the requirements, and will notify PIs of such requirements.
- b) The REEP in the Graduate Division will be available to provide options for meeting the requirements for training and education in RCR; identify resources necessary for providing training in responsible and ethical research practices; and will 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.

c) ***Faculty/Principal Investigators are responsible for:***

Working with RED to identify trainees required to complete RCR training associated with funding requirements.

Verifying that trainees have completed baseline RCR training requirements as described in this plan.

Actively working with the student to find appropriate additional RCR training, depending on discipline and career stage.

Documenting additional RCR training received when such additional training is required, and providing documentation to RED upon request.

Maintain verification of training documentation provided by trainees that evidence RCR training obtained from another institution,

If appropriate, providing such training for one's trainees.

d) *Trainees are responsible for:*

Accessing and completing baseline RCR training, and retaining a copy of documentation of training.

Actively working with the faculty mentor to find appropriate additional RCR training, depending on discipline and career stage.

Maintaining documentation of additional training.

Submitting to the project's faculty supervisor the verification of training documentation of RCR training obtained from another institution within the past 18 months.

## **5. RCR Plan Assessment**

The primary objective is to enhance scientific integrity by training scholars in the accepted standards and norms of science. RCR training is intended to promote awareness and understanding of conventions within and across disciplines. The RCR training plan will be assessed periodically by RED and the Research Ethics Education Program in the Graduate Division.

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