University of Iowa Responsible Conduct of Research (RCR) Training Plan

Last updated July 2022

1. **Rationale:** The University of Iowa is obligated to ensure that faculty, staff, and students conducting research are trained in the responsible conduct of research (RCR). As a premier academic research institution training the country's future generations of researchers, it is imperative that we instill basic principles of scholarly integrity and ethical approaches to meet the needs of the University's research mission. Training in the Responsible Conduct of Research (RCR) is a federal requirement for scholars funded by NSF, NIH and USDA NIFA as detailed below:

   > The America COMPETES Act includes a requirement that **all undergraduate students, graduate students (MA, MS and PhD), and postdoctoral researchers** "who will be supported by National Science Foundation (NSF) to conduct research" receive training in the Responsible Conduct of Research (RCR).

   > NIH requires that all **trainees (undergraduate, MA, MS, and PhD), postdoctoral fellows, scholars and other trainees** receiving support through any NIH training, career development award (individual or institutional), research education grant, and dissertation research grant must receive instruction in responsible conduct of research.

   > The U.S. Department of Agriculture (USDA)'s National Institute of Food and Agriculture (NIFA) has mandated that **program directors, faculty, undergraduate students, graduate students (MA, MS and PhD), postdoctoral researchers, and any staff** participating in the research project receive appropriate training and oversight in the responsible and ethical conduct of research (RCR). Any award issued after February 1, 2013, must comply with this requirement.

2. **The University of Iowa Policy for Training in Responsible Conduct of Research:** The Office of the Vice President for Research (OVPR) and the Graduate College ensure that institutional compliance guidelines are met. All students/trainees engaged NIH-/NSF- /USDA's NIFA- research **MUST** complete RCR training. **Note:** some other federal funding agencies, such as NASA, the Department of Energy, and the Department of Education, may also require RCR training as part of the terms for the grant award. Contact the Division of Sponsored Programs with questions about RCR training requirements.

3. **Responsibility for RCR Training:** The PI, trainee and College are all participants in RCR training. The PI is responsible for informing the trainee of the RCR training requirements and assuring that the trainee participates the trainee is responsible for

initiating and completing the training within the required time frame. The College is responsible for assuring that appropriate RCR courses or programs are developed and instituted.

4. **Training Requirements:** Our current RCR program focuses on the four groups specifically engaged in NIH- /NSF- /USDA's NIFA- funded research or other scholarly creativity involving undergraduates, predocs, postdocs and early career faculty holding NIH K-Awards. At this time, RCR training is mandatory only for those individuals as outlined below; however, all students, staff and faculty, **particularly graduate students and post-doctoral fellows**, engaged in research are eligible and **encouraged to participate** in RCR training.

   For the purposes of RCR education, members of these four groups are designated as trainees.

   Undergraduates: ALL undergraduate trainees funded by a grant from NSF, NIH and NIFA must complete the online CITI training program on Responsible Conduct of Research within one month of their appointment. Instructions for logging on to the CITI site can be found at https://grad.uiowa.edu/postdocs/training-rcr/approved-courses. On-line testing is employed to measure comprehension.

   Professional Degree students: ALL AuD, DDS, DNP, MD, MHA, MPH, MSN, PharmD trainees funded by a grant from NSF, NIH and NIFA must complete the online CITI training program on Responsible Conduct of Research within the first semester of their appointment. Instructions for logging on to the CITI site can be found at https://grad.uiowa.edu/postdocs/training-rcr/approved-courses. On-line testing is employed to measure comprehension.

   Predocs (MS, MA and PhD): ALL predoctoral trainees funded by NSF, NIH and NIFA must complete the two-phase training program described below **within the first 2 years** of their appointment to a grant funded project and if applicable Phase 3 if their funded training extends more than 4 years.

   Postdocs and K-Award faculty: All trainees funded by NSF, NIH and NIFA must complete the two-phase training program described below **within the first year** of their appointment. If the appointment extends beyond 4 years, phase 3 training will also be required.

5. **Content:** RCR subject matter must meet federal mandated requirements (NOT-OD-22-055). For consistency of RCR training across campus, the University of Iowa follows the training requirements stated in NOT-OD-22-055. Training is defined to accommodate research disciplines across the campus and includes the topics listed below. **Note:** completion of Institutional Review Board (IRB) or IACUC/Animal Welfare specific training alone does not meet the federal RCR requirements):

   - Research misconduct and policies for handling misconduct.

- Data Acquisition and analysis; laboratory tools (e.g., tools for analyzing data and creating or working with digital images); recordkeeping practices, including methods such as electronic laboratory notebooks.
- Secure and ethical data use; data confidentiality, management, sharing, and ownership.
- Conflicts of Interest – personal professional, and financial – and conflict of commitment, in allocating time, effort, or other research resources.
- Policies regarding human and live vertebrate animal subjects in research and safe laboratory practices.
- Responsible authorship and publication.
- Mentor/Mentee Responsibilities and Relationships.
- Peer Review, including the responsibility for maintaining confidentiality and security.
- Collaborative research including collaborations with industry and investigators and institutions in other countries.
- Safe research environments (e.g., those that promote inclusion and are free of sexual, racial, ethnic, disability and other forms of discriminatory harassment).
- The scientist as a responsible member of society, contemporary ethical issues in biomedical research, and the environmental and societal impacts of scientific research.

6. **Training Schedule**

Phase 1 Online CITI training: Within the first month after being appointed to participate as a trainee on a project funded by NSF, NIH and NIFA **all** trainees must complete the online CITI training program on Responsible Conduct of Research. Instructions for logging into the CITI site can be found at: https://grad.uiowa.edu/postdocs/training-rcr/approved-courses On-line testing is employed to measure comprehension.

Phase 2 Face-to-Face Discipline specific courses: Trainees (except for undergraduates) are required to enroll in a discipline specific RCR course after completion of the Phase 1 CITI training. Courses are offered by programs, departments and colleges and are developed and annually audited with the approval of the Graduate College. There is a minimum requirement of 8 face-to-face contact hours for these courses. Beginning in 2016-2017, all Colleges are responsible for assuring that their own students have an in-person training option that meets the federal requirements and has been approved by the Graduate College. Trainees must complete the RCR course once enrolled. Acceptable completion grades are either S (satisfactory) or B- or better depending on the grading system used by the unit offering the course. A list of approved Graduate College courses can be found at https://grad.uiowa.edu/postdocs/training-rcr/approved-courses.

Phase 3 Re-Certification: Additional RCR training is required every 4 years while funded by NSF, NIH and NIFA (e.g., if you remain at the same trainee level longer than 4 years). You must take RCR training or at each new stage of training (e.g.: moving

from undergraduate to graduate student, undergraduate to MD training, PhD to postdoc or postdoc to faculty). Re-Certification training is mandated by NIH, NSF and NIFA. For both situations, you must complete Phase 1 (CITI RCR course) and Phase 2 (enroll and complete a Graduate College approved course) training.

Additional Programmatic RCR training: NIH T32 trainees may be required to complete specific T32 RCR training identified by their individual NIH training programs.

7. Failure to Complete RCR Training and Consequences:

For undergraduates, failure to complete the CITI training in the designated time, results in 1) suspension of research activities and 2) loss of compensation. In order for compensation to resume and to continue research activities requires that the undergraduate trainee successfully complete CITI RCR training.

For predocs, postdocs and K-Award faculty, failure to complete all required RCR phases within the designated period of time results in **suspension of trainee grant funding and support,** which includes stipend, tuition, fees, travel, supplies, etc. To have funding reinstated, the trainee must complete (or retake) CITI RCR on-line training and enroll in a Graduate College approved graduate or postdoctoral course RCR Course. Only after CITI RCR training has been successfully completed/retaken and registration for an approved RCR Course will funding be restored.

8. Certification

Upon satisfactory completion of the designated CITI modules and RCR coursework, the transcript of the trainee is updated to indicate that RCR training has been completed. Electronic records from CITI are available for review by the Research Integrity Officer in OVPR. For predocs and postdocs, the student's University transcript will reflect satisfactory completion of their discipline specific RCR course. For faculty, the employment record will identify satisfactory RCR completion.

The Office of the Vice President for Research will be responsible for the overall RCR plan and for providing information to sponsoring agencies regarding compliance with RCR training.

9. Transfer of RCR Training Between Institutions:

The University of Iowa does not at this time accept RCR training records from other institutions. The one exception is CITI RCR course work with proof of completion (e.g., course certificate).

If a trainee leaves another institution (e.g., as a predoc) and transfers to the University of Iowa (e.g., enters as a predoc), they must complete the online CITI RCR training and an

approved RCR course through the graduate college. The CITI RCR training can be waved with proper documentation of completion at the previous institution and if it was completed within the past 4 years.

If a trainee enters the University of Iowa from another institution as part of a new phase of their career (e.g., completed predoc training elsewhere and enters Iowa as a postdoc), then the trainee will need to take new RCR training consistent with their change in position per the plan outlined above.

If a trainee transfers from the University of Iowa to another institution and has successfully completed RCR training, the University of Iowa upon request will provide documentation of RCR training for the new institution.

10. **Maintenance of RCR Content**

RCR content will be reviewed at appropriate intervals and modified 1) to include new material such as pertinent discipline specific case studies and 2) to remove outdated or obsolete information. The faculty responsible for approved RCR courses will ensure that:

> 1. Concepts of scholarly integrity, responsible conduct of research, and research ethics acknowledged in the course description and objectives.
> 2. Completion of collaborative Institutional Training Initiative (CITI) online modules prior to completion of the approved graduate or postdoctoral coursework.
> 3. Core competency areas must be explicitly covered and outlined on all course syllabi and discussed in class regardless of discipline.

Instruction must involve substantive contact hours between the trainees/fellows/scholars/participants and the participating faculty: a combination of didactic and small-group discussions (e.g., case studies, active learning); and participation of research training faculty members in instruction in responsible conduct of research are required. Acceptable programs must include a **minimum of 8 contact hours**. Virtual and hybrid (in person and virtual) courses are allowed provided they are using a format (e.g. Zoom or Microsoft Teams) that allows for real-time interaction/discussion/participation.

The Office of the Vice President for Research will conduct an annual audit of the RCR program and courses to evaluate the overall training process, monitor effectiveness, and create opportunities for content/process improvement. OVPR, through the Research Integrity Officer (RIO), will ensure compliance with the RCR Plan.