RCR Training Procedures

Purpose: This document summarizes the procedures of the Office of Research Protections and Integrity (ORPI), Division of Research, in ensuring institutional compliance with sponsor requirements for training in the responsible and ethical conduct of research (RCR / RECR).

Summary of Sponsor Requirements

A. **National Science Foundation (NSF):** The current edition of the NSF's Proposal & Award Policies & Procedures Guide (PAPPG, effective January 30, 2023), expanded on July 31, 2023, outlines the requirements for training in responsible and ethical conduct of research (RECR). Currently, all personnel receiving NSF funds – undergraduate and graduate students, postdoctoral researchers, faculty, and other senior personnel supported by NSF-funded research awards must complete RECR training.

   Per NSF guidance, each recipient institution is to determine the content, focus, and delivery method for RECR training, but mentor training and mentorship must be addressed. The NSF does not specify the timing, frequency, or duration of training but leaves this determination up to recipient institutions.

B. **National Institutes of Health (NIH):** NIH published its RCR training requirements in [NOT-OD-10-019](NOT-OD-10-019) (November 2009) and has since published an update via [NOT-OD-22-055](NOT-OD-22-055) (February 2022). NIH requires RCR instruction for trainees, fellows, participants, and scholars receiving support through training or career development awards, research education grants, and dissertation research grants. The following programs are explicitly included in this requirement: 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; for other training/development programs, the requirement for RCR training is stated in the funding opportunity announcement (FOA).

   To comply with NIH requirements, training must include a face-to-face, discussion-based component that supports engagement and interaction. NIH endorses at least 8 contact hours of RCR instruction during each career stage (i.e., undergraduate, post-baccalaureate, predoctoral, postdoctoral, and faculty levels) and at least once every four years. As indicated in [NOT-OD-10-019](NOT-OD-10-019), training for short-term (e.g., 6-month) programs and participants may be abbreviated and conducted fully online.

   NIH does not specify when RCR training must be completed in relation to an award but cites a semester-long seminar series as appropriate. Although a specific curriculum is not prescribed, NIH lists multiple topics that are typically covered under acceptable training programs:
   - conflicts of interest and commitment
   - policies regarding human or vertebrate animal subjects in research and safe laboratory practices
   - mentor/mentee responsibilities and relationships
   - "safe" research environments (e.g., those that promote inclusion / are free of harassment)
   - collaborative research, including collaborations with industry and international partners
   - peer review, including confidentiality and security in peer review
   - data acquisition and analysis; laboratory tools (e.g., for analyzing data and creating/working with digital images); recordkeeping practices

- secure and ethical data use; data confidentiality, management, sharing, and ownership
- research misconduct and associated policies
- responsible authorship and publication
- the scientist as a responsible member of society, contemporary ethical issues in biomedical research, and the environmental and societal impacts of research

C. **National Institute of Food and Agriculture (NIFA):** NIFA, an agency within the U.S. Department of Agriculture, published RCR training requirements in its [February 2013 Research Terms and Conditions](#). Subsequent to this policy, all NIFA awards entail that program directors, faculty, undergraduate students, graduate students, postdoctoral researchers, and any staff participating in the research project receive appropriate RCR training. At a minimum, acceptable training must cover authorship and plagiarism, data and research integration, and reporting misconduct. To fulfill its requirements, NIFA specifically endorses the RCR courses that are available online through the Collaborative Institutional Training Initiative (CITI) program. NIFA does not specify when training must be completed in relation to an award.

ORPI Procedures

On a monthly basis, ORPI receives a WebFocus report listing personnel newly subject to RCR training requirements based on the creation of award-associated job records on the payroll. Each personnel listing includes the award sponsor and the position (e.g., student, postdoc, etc.). Within one week of receiving this report, ORPI emails all listed personnel, alerting them to the RCR training requirement and their options for completing training.

Non-compliance: If personnel fail to complete and report an approved RCR training program within the time specified, ORPI will send a past-due notification and copy the department chair or the dean. A 1-month grace period will be allotted to comply with training requirements. Personnel who fail to complete and report an approved RCR training program within the time specified may be removed from the funded project until an approved course is successfully completed. In addition, the entire award may be placed on hold, and payments may be halted temporarily.

For NSF and NIFA awards, training options include the following:

1. **CITI Online Training:** A variety of discipline-specific RCR courses are available on demand through the CITI program. RCR courses address topics of Conflict of Interest and Commitment; Plagiarism; Authorship; Data Management; Reproducibility; Collaboration; Peer Review; Mentoring; and Research Misconduct. Depending on the discipline, additional topics may include Human Subject Research; Animals in Research; and Environmental/Social Dimensions of Engineering Research.

2. **Approved Research Ethics Courses:** The UNC Charlotte Graduate School approves department-specific courses that fulfill RCR training requirements. The current slate of courses includes the following:
   - *Research Ethics in Biological and Behavioral Sciences* (PHIL 6240/8240, GRAD 6240/8240)
   - *Responsible Conduct of Research* (GRAD 6002/8002, GRAD 6302/8302)
   - *Careers in Bioscience: Professional Development and Responsible Conduct* (BIOL 6260/8260)
   - *Doctoral Seminar in Special Education Research* (SPED 8671)
   - *Research Design in Public Policy* (PPOL 8602)

- ○ *Ethical and Professional Issues in Psychology* (PSYC 6107/8107)
- ○ *Applied Research Methods* (RSCH 8210)
- ○ *Responsible Conduct of Research* (OPTI 8107)

For <u>NIH training/career development awards</u>, training options include the following:

1. **Approved Research Ethics Courses:** The UNC Charlotte Graduate School courses listed above fulfill NIH requirements for face-to-face, discussion-based training.

2. **ORPI Seminars:** The ORPI organizes a variety of seminars for the UNC Charlotte research community on an annual or semiannual basis, addressing topics relevant to human or animal subjects research, conflicts of interest and commitment, export controls, and research misconduct.

3. **Graduate School Training Available:** The UNC Charlotte Graduate School offers regular Mentor Training for graduate faculty and Mentee Training for doctoral students.
   - ○ <u>**Mentor Training:**</u> Provided by the Graduate School, sessions are held throughout the year. These intensive, day-long sessions are based on the practices of the CIMER Institute. View the Mentor Training web page for information.
     Mentor training is part of the effort to improve the research climate at UNC Charlotte. The Graduate School offers mentor training to graduate faculty who seek to be better research mentors. This training comes from the evidence-based practices of the CIMER Institute (Center for Improved Mentoring Experiences in Research) at the University of Wisconsin. Training is intensive and limited to 25 per session. Sessions will be offered at least three times per year but can also be made available to a program by request.
     [Calendar here](#)
   - ○ <u>**Mentee Training:**</u> The Reynolds Center for Graduate Life and Learning will offer three sessions of Mentee Training this fall. Developed using the curriculum from the Center for Improvement of Mentored Experiences in Research (CIMER), this program is meant for doctoral research students to build skills to successfully navigate research endeavors. We'll cover how to build and manage your relationship with your advisor and mentors, how to work well with your labmates and have a successful research experience, and how to plan for and develop a career path that is just right for you. Each session will last three hours and begin with lunch, networking, and introductions. We recommend you attend all three sessions sequentially. If you can't make them all, they can also stand alone

4. **Topical Forums, Workshops, and PI/Mentor-Led Discussions:** Recognizing that RCR instruction should foster engagement and accommodate the career stage of attendees, the NIH encourages a tailored approach to training. Topical didactic and small-group discussions, workshops (internal or external), and other events may all contribute to an effective program of RCR instruction.

NSF / NIFA personnel are allotted four weeks to complete training and receive two email notifications regarding the training requirement (the final notice copies the award PI or a department chair). Future enrollment in an approved course is not acceptable. If an approved course was passed within the previous four years, personnel are advised to respond with the course information. The ORPI cross-checks these responses against the CITI database or against the Graduate School's reports of passing scores in University research ethics courses.

NIH personnel must self-report training – including the topic, date, session leader, and contact time for non-course methods – to the ORPI. For graduate students, a passing score in an approved University research ethics course is sufficient to fulfill the NIH requirement at this career stage. Otherwise, personnel may complete a combination of the training options described above. Per NIH guidance, personnel should complete 8 contact hours of RCR instruction that addresses a variety of the topics listed under the **Summary of Sponsor Requirements, NIH.** Starting from the initial ORPI notification, NIH personnel are allotted 5 months to complete and report training.

The ORPI records all verified RCR training in a comprehensive spreadsheet. Personnel are expected to repeat an approved training program every four years in order to maintain eligibility for payments from an NSF, NIFA, or NIH training or career development award. NIH personnel are also expected to complete an RCR training program at each career stage (i.e., undergraduate, post-baccalaureate, predoctoral, postdoctoral, and faculty levels).

Pending Changes to Procedures

A. **Smartsheet integration:** The ORPI will develop a Smartsheet to automate RCR notifications, including reminders, and to track training progress (for NIH) and completion. Smartsheet will replace the current email-based procedures described in these procedures.