

RESPONSIBLE CONDUCT OF RESEARCH

Earlham College operates with Quaker values, including seeking the truth, wherever the evidence may lead, and rigorous intellectual integrity, at the fore of all endeavors. As an academic community engaged in the practice of science and scholarship, these values unite us with the broader academic community in an interest in the responsible conduct of research as well as imparting these ethical considerations to our student scholars.

Regulations and Institutional Responsibilities

Section 7009 of the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science (COMPETES) Act (42 U.S.C. 1862o-1) requires that “each institution that applies for financial assistance from the National Science Foundation (NSF) for science and engineering research or education to describe in its grant proposal a plan to provide appropriate training and oversight in the responsible and ethical conduct of research to undergraduate students, graduate students, and postdoctoral researchers participating in the proposed research project.” Training plans may not be required as part of the proposal submission to NSF; however, institutions are advised that they are subject to review, upon request. As noted in the NSF Proposal and Award Policies and Procedures Guide (PAPPG) (https://www.nsf.gov/pubs/policydocs/pappg17_1/nsf17_1.pdf) Part I Chapter II.C.1d, institutional certification to this effect is required.

Currently, institutions are free to develop their own plans, and at present there are no NSF-recommended models.

Other federal agencies also have RCR training requirements; for example The National Institutes of Health (NIH) has Responsible Conduct of Research (RCR) requirements for trainees supported by NIH grants; the definition of trainee does not include undergraduate research assistants who are paid grant-funded wages on R01 and R15 awards.

The United States Department of Agriculture (USDA) National Institute of Food and Agriculture (NIFA) grants require all program directors, faculty, graduate students, undergraduate students, postdoctoral researchers and staff who are paid from NIFA grants receive training in RCR. The RCR training provided to each individual must be documented and is subject to NIFA review.

Plan Regarding Responsible Conduct of Research (RCR) Training

This plan is designed to comply with the above requirements and covers all proposals submitted by Earlham College that are subject to RCR training requirements. This plan is applicable for training undergraduate students and monitoring that training; Principal Investigators for all proposals seeking support for graduate students or postdoctoral researchers must develop a plan for RCR training specific to their projects and in compliance with any requirements set by the applicable funding sponsor.

For all grants that have an RCR training requirement:

1. Faculty Principal Investigators (PIs) have the primary responsibility for complying with RCR training requirements on their awards and for training the undergraduate students involved in their research.
2. RCR training will be required for all undergraduate students participating in the funded research, including students receiving wages, students working as volunteers, and students receiving academic credit. In general, training must be completed within the semester or summer that the student begins work on the funded research.
3. Each student must successfully complete all of the required elements of the CITI Program online RCR training module.* Successful completion will be documented by downloading the certification generated by the CITI online training program and submitting the certificate by email to the Director of Sponsored Programs and Foundation Relations, Sara Paule at paulesa@earlham.edu.
4. Faculty mentors are strongly encouraged to discuss the RCR training and research ethics within their specific disciplines with their students prior to and after students complete their training; faculty should complete the training as well.

While, the CITI Program RCR training module is designed to be broadly applicable across academic disciplines, they acknowledge that accepted practices for the responsible conduct of research can and do vary among disciplines, which is why on-going face-to-face training between research mentors and collaborating students is an essential secondary component of imparting discipline-specific values.

Additional Resources

There are many resources for learning about and teaching research ethics. Here are a few of potential interest to the Earlham community:

- [Office of Research Integrity](#) – Department of Health and Human Services Resources
- [Center for the Study of Ethics in the Professions](#) – Ethics Education Library
- [Responsible Conduct of Research At Predominantly Undergraduate Institutions](#) – Resource Guide
- [Online Ethics Center for Engineering](#) – Teaching Tools Website
- [Resources for Research Ethics Education](#) – Teaching Tools Website

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* This requirement can be waived by the Director of Sponsored Programs and Foundation Relations for students who have successfully completed an RCR workshop (at another institution) designed to satisfy RCR training requirements; the Director of Sponsored Programs and Foundation Relations will specify what constitutes appropriate documentation in these cases.