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| University of Tennessee at Chattanooga Standard Operating Procedures | | |
| Date of Preparation: 09/21/2021 Updated: 09/04/2023 | TITLE: <i>Responsible and Ethical Conduct of Research Institutional Plan – USDA NIFA</i> | Page 1 of 3 |

Objective

To ensure that all program directors, faculty, undergraduate students, graduate students, postdoctoral researchers, and any staff participating in a United States Department of Agriculture’s National Institute on Food and Agriculture (USDA NIFA) research project receive appropriate training and oversight in the Responsible and Ethical Conduct of Research (RECR) and that documentation of such training will be maintained.

Rationale and Requirements

As noted by the National Academies of Science in a 2017 report,¹ detrimental research practices and scientific misconduct continue to erode public trust in science. Through the USDA and other agencies, the federal government seeks to improve the quality of scientific research and education and better equip future researchers for effective and ethical stewardship of federal funding.

In accordance with section 2,3, and 8 of 2CFR Part 422,³ USDA NIFA has mandated that all institutions conducting USDA-funded extramural research must meet three requirements related to the Responsible and Ethical Conduct of Research:

- An institution must foster an atmosphere conducive to research integrity,
- An institution must bear primary responsibility for prevention and detection of research misconduct,
- An institution must maintain and effectively communicate and train their staff regarding policies and procedures.

An essential part of fostering an atmosphere conducive to research integrity is providing education in RECR. Although design of the training program is left up to institutions, USDA states that the content should emphasize three key areas of research ethics: authorship and plagiarism, data and research integration, and reporting misconduct.⁴

Applicability

USDA NIFA requires all program directors, faculty, undergraduate students, graduate students, postdoctoral researchers, and any staff *participating in the USDA-supported research project* receive appropriate RECR training and oversight and that documentation of such training will be maintained. Documentation of the training are subject to NIFA review upon request.

UTC Institutional RECR Training Plan Components

The Institutional RECR Training Plan includes required core education specific to a trainee’s educational level (i.e., undergraduate, graduate student, postdoctoral researcher, staff, faculty, program director). Required components of RECR compliance include UTC-developed training as well as online research ethics courses offered through the Collaborative Institutional Training Initiative (CITI) program.⁵ UTC-developed trainings are offered periodically in an in-person format by the Office of Research Integrity (ORI) and are also accessible online. Researchers are encouraged to contact ORI⁶ if in-person instruction is desired. The required RECR training modules applicable to trainees by level of education are noted in the table below.

| RECR Core Training and Education Components by Trainee Education Level | | | | | |
|---|-------|------------------------|-------------------|----------|---------------------------|
| Training/Education Component | Staff | Undergraduate Students | Graduate Students | Postdocs | Program Director, Faculty |
| CITI Responsible Conduct of Research Course: Discipline-Specific | • | • | • | • | • |
| CITI RCR Advanced Topics Course | | | • | • | • |
| ORI Misconduct in Research and Service Policy | | | • | • | • |

Training/education components in bold and highlighted in the table above should be completed before USDA NIFA support begins. All other RECR core training and education components should be completed within 60 days from the date USDA support begins.

Program Directors may opt to supplement core training with additional project- or discipline-specific RECR training as appropriate. A list describing the topics and content covered in required and optional RECR training modules is provided to principal investigators at the time of USDA award receipt and can also be found on the ORI [website](#). Principal investigators are encouraged to work with ORI staff to identify and/or develop discipline-specific RECR training and education resources.

Ensuring Compliance with the Institutional RECR Plan

Principal Investigator (PI) responsibilities. The PI of each USDA NIFA award subject to the RECR training requirement is responsible for:

- Providing the Office of Research Integrity with a list of trainees at each educational level (as applicable) who will be supported by USDA NIFA funds and require RECR instruction.
- Updating the list of trainees if new individuals begin work during the project.
- Indicating the date that USDA NIFA support will begin for each trainee.
- Identifying any additional RECR training to be provided beyond the core components, and the timetable for delivery.

Trainee responsibilities. Undergraduates, graduate students, postdoctoral researchers, faculty, and staff who will be participating in a USDA NIFA research project are responsible for:

- Completing mandatory RECR training and education within the applicable timeframe.
- Completing optional or refresher RECR training as assigned by the PI or Compliance Officer.

Compliance Officer responsibilities. The Compliance Officer or a designee is responsible for:

- Verifying that trainees have satisfactorily completed mandatory RECR training.
- Maintaining records of RECR training completion in the grant award file for each project funded by USDA NIFA that is subject to the RECR training requirement.
- Notifying PIs and trainees when RECR training requirements have not been completed within an appropriate timeframe.

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References and Links

- ¹ National Academies of Sciences, Engineering, and Medicine 2017. *Fostering Integrity in Research*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/21896>.
- ³ Code of Federal Regulations Part 422: <https://www.ecfr.gov/current/title-2/subtitle-B/chapter-IV/part-422>
- ⁴ USDA NIFA Responsible and Ethical Conduct of Research Requirements: <https://nifa.usda.gov/responsible-and-ethical-conduct-research>
- ⁵ Collaborative Institutional Training Initiative: www.citiprogram.org
- ⁶ UTC Office of Research Integrity: <https://new.utc.edu/research/research-integrity>