

University of Tennessee at Chattanooga Standard Operating Procedures		
Date of Preparation: 09/29/2020 Updated: 02/27/2023	TITLE: <b><i>Responsible and Ethical Conduct of Research Institutional Plan - NSF</i></b>	Page 1 of 3

## **Objective**

To ensure that investigators who receive funding from the National Science Foundation (NSF) provide mandated training and oversight in the Responsible and Ethical Conduct of Research (RECR) to faculty, senior personnel, undergraduate students, graduate students, and postdoctoral researchers involved in conducting research while supported by NSF.

## **Rationale and Requirements**

As noted by the National Academies of Science in a 2017 report,<sup>1</sup> detrimental research practices and scientific misconduct continue to erode public trust in science. Through the National Science Foundation 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.

These goals are not new. In January 2010, Congress passed the America COMPETES Act<sup>2</sup> with the goal of focusing public attention on the importance of ethical training in engineering and science (42 U.S.C. 1862o-1). In response, NSF mandated that recipients of NSF awards supporting research and education must meet three requirements related to the Responsible and Ethical Conduct of Research:

- An institution must have a plan in place to ensure that faculty, senior personnel, undergraduate students, graduate students, and postdoctoral researchers who will be supported by NSF to conduct research will receive effective RECR training;
- An institution must designate one or more persons to ensure compliance with the NSF RECR training requirement;
- An institution must verify that supported researchers receive the appropriate RECR training.<sup>3</sup>

## **Applicability**

NSF RECR requirements apply to all faculty, senior personnel, undergraduates, graduates, and postdoctoral researchers who receive salary or stipend support from NSF to conduct research. As clarified in the NSF RCR FAQs,<sup>4</sup> this requirement also applies in the following situations:

**NSF-supported scholarships, tuition remission, and stipend support.** Students who receive only scholarship or stipend support to enroll in an academic program through NSF-funded programs such as S-STEM and Noyce are not necessarily required to receive RECR training. However, students must complete RECR training if they receive NSF scholarship or stipend support to engage in research, or *if conducting research is included in their academic program* (e.g., as part of a research methods course or capstone project).

**Graduate fellowship awards.** Institutions that host graduate fellows to conduct research will be required to ensure that the fellows have received RECR training.

**Subawards.** The RECR training requirement flows down to all subawardees, at any tier and including international organizations. The proposing institution must ensure that RECR requirements are appropriately addressed in the subaward instrument.

**Award Transfers.** For NSF awards transferred from one institution to another, the new institution becomes responsible for ensuring the training requirements are met for the appropriate individuals at its institution.

**Exceptions.** The RECR requirements do not apply to NSF awards that do not provide funding for students who will be conducting research during the period of support—e.g., grants that fund equipment purchases, conferences/symposia/workshops, travel, or educational activities that do not include research.

**Supplemental awards.** If supplemental awards are made in connection with a parent award that does not require RECR training, and the supplemental awards include funding to support trainees who will be conducting research during the period of support, RECR training requirements will apply.

### **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, faculty/senior personnel). 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.<sup>5</sup> 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 ORI<sup>6</sup> if in-person instruction is desired. The required RECR training modules applicable to trainees by level of education are noted in the table below.

<b>RECR Core Training and Education Components by Trainee Education Level</b>				
<b>Training/Education Component</b>	<b>Undergrads</b>	<b>Graduate Students</b>	<b>Postdocs</b>	<b>Faculty/ Senior Personnel</b>
<b>CITI Responsible Conduct of Research Course: Discipline-Specific</b>	•	•	•	•
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 the researcher begins receiving support from NSF. All other RECR core training and education components should be completed within 60 days from the date NSF support begins for the researcher.

Principal investigators 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 NSF 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 NSF award subject to the RECR training requirement is responsible for:

- Personally completing the required RECR training.
- Providing the Office of Research Integrity with a list of senior personnel/trainees at each educational level (as applicable) who will be supported by NSF funds and require RECR instruction.
- Updating the list of senior personnel/trainees if NSF support is provided to new individuals during the project.

- Indicating the date that NSF support will begin for each individual.
- Identifying any additional RECR training to be provided beyond the core components, and the timetable for delivery.

Senior Personnel/Trainee responsibilities. Senior Personnel, undergraduates, graduate students, and postdoctoral researchers who will be conducting research in any context while receiving NSF support 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 all faculty, senior personnel, and trainees have satisfactorily completed mandatory RECR training.
- Maintaining records of RECR training completion in the grant award file for each project funded by NSF that is subject to the RECR training requirement.
- Notifying PIs and trainees when RECR training requirements have not been completed within an appropriate timeframe.

### **Office of Research Integrity Contacts**

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### **References and Links**

<sup>1</sup> National Academies of Sciences, Engineering, and Medicine 2017. *Fostering Integrity in Research*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/21896>.

<sup>2</sup> America COMPETES Act RECR Training Requirements: <http://www.nsf.gov/bfa/dias/policy/rcr.jsp>

<sup>3</sup> NSF RECR guidance in the Proposal and Award Policies and Procedures Guide: [https://nsf.gov-resources.nsf.gov/2022-10/nsf23\\_1.pdf](https://nsf.gov-resources.nsf.gov/2022-10/nsf23_1.pdf)

<sup>4</sup>National Science Foundation. “RCR Frequently Asked Questions (FAQs).”

<https://www.nsf.gov/bfa/dias/policy/rcr/rcrfaqs.jsp>

<sup>5</sup>Collaborative Institutional Training Initiative: [www.citiprogram.org](http://www.citiprogram.org)

<sup>6</sup>UTC Office of Research Integrity: <https://new.utc.edu/research/research-integrity>