

Implemented: January 4, 2010
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COLUMBIA UNIVERSITY PLAN FOR FULFILLING NSF RESPONSIBLE AND ETHICAL CONDUCT OF RESEARCH (RECR) TRAINING REQUIREMENTS

Introduction

The University receives significant funding from the National Science Foundation to conduct research projects. In accordance with the America COMPETES Act, NSF requires training in the Responsible Conduct of Research for all:

- undergraduates,
- graduate students, and
- postdocs

who receive NSF funds in the form of support from salary and/or stipends to conduct research on NSF grants. The Responsible and Ethical Conduct of Research (RECR) training requirement applies to all awards from proposals submitted, or due, on or after January 4, 2010, to conduct research, which excludes, for example, conference, symposium, workshop, or travel proposals. (Details about the NSF RECR requirements are available here:

<http://www.nsf.gov/pubs/policydocs/rcr/rcrfaqs.jsp>)

NSF's regulations require that, at the time of proposal submission, "[a]n institution must have a plan in place to provide appropriate training and oversight in the responsible and ethical conduct of research to undergraduates, graduate students, and postdoctoral researchers who will be supported by NSF to conduct research. As noted in [Chapter II.C.1.d](#), an institutional certification to this effect is required for each proposal." In addition, "[i]nstitutions are responsible for verifying that undergraduate students, graduate students, and postdoctoral researchers supported by NSF to conduct research have received training in the responsible and ethical conduct of research." This document outlines the University's guidelines for compliance with NSF's requirements.

Effective June 1, 2020, the NSF has broadened its definition of RECR¹ to include the responsibility to:

- a. Conduct peer review with the highest ethical standards;
- b. Diligently protect proprietary information and intellectual property from inappropriate disclosure; and
- c. Treat students and colleagues fairly and with respect.

Guidelines

¹ https://www.nsf.gov/pubs/policydocs/pappg20_1/pappg_9.jsp#IXB

It is the responsibility of the Principal Investigator to ensure that all postdocs, graduate students, and undergraduates who receive NSF funds in the form of support from salary and/or stipends to conduct research on NSF grants receive training in RECR. In general, training should be completed within three months of when the individual begins work on the project, or the individual must provide a plan through which training will be completed within a reasonable timeframe (e.g., registering for a course in the coming semester). Where individuals are working on NSF projects for a short time, such as the summer, training should be completed before the individual's work on the project ends.

The Office of Research Compliance and Training (RCT) will coordinate the collection and maintenance of compliance information. Working with Sponsored Projects Administration and Columbia University Information Technology, RCT will identify individuals who are required to receive training and will track training completions. Reports of non-compliance will be generated and shared with PIs and DAs for follow-up.

A. Options for fulfilling RECR training requirement

The University offers several options for individuals to receive training in RECR:

- **Collaborative Institutional Training Initiative (CITI) Training** – CITI is a consortium of research institutions that has created web-based training in the Responsible Conduct of Research, among other areas. CITI is used by over 1,500 institutions worldwide for training in RECR, human subjects protection and other research-related compliance areas. Access and tracking is through Rascal and administered by the Office of Research Compliance and Training. Learners are required to complete up to 12 modules:
 - Introduction to RCR
 - Research misconduct
 - Conflict of interest
 - Publication practices and responsible authorship
 - Data acquisition, management, sharing, and ownership
 - Mentor/trainee responsibilities
 - Peer review
 - Patents, Licenses, and Science-based Startups: Tech Transfer
 - Collaborative science
 - Human subjects
 - Animal subjects (biomedical researchers only)
 - Columbia-specific RCR module

Much of the content in the CITI RCR course is taken from content developed at Columbia and other institutions under contracts with the Department of Health and Human Services' Office of Research Integrity.

The CITI course can be accessed through the Rascal Training Center, course TC0094 (<https://www.rascal.columbia.edu/login/tc0094/>). All modules need not be completed in one sitting.

- **Established Columbia Courses:**
 - Morningside - *Research Ethics* (Permission of instructor required.)
 - Course Website: <https://sps.columbia.edu/academics/masters/bioethics/full-time-master-science/full-time-curriculum-courses>
 - CUIMC - *Responsible Conduct of Research and Related Policy Issues*, Arthur Palmer and Jaime Rubin (required for all CUMC graduate students except for the students in the Department of Neurology; open to postdocs on request and subject to availability)
 - Course website: <https://www.gsas.cuimc.columbia.edu/responsible-conduct-research-and-related-policy-issues>

- **School/Departmental Offerings** – Many departments provide or plan to provide RCR training through previously established or newly created offerings. For example, [Chemistry G8349 - Research Ethics & Philosophy](#), can be used to satisfy the NSF RCR requirement; it is open to graduate students in GSAS, SEAS and SIPA.

To ensure compliance with NSF requirements, departmental offerings must be reviewed by the Office of Research Compliance and Training, and the department must maintain appropriate compliance documentation. The Office of Research Compliance and Training is available to provide support. Such offerings should be reviewed by the Office of Research Compliance and Training to assure that they are generally comparable to other commonly accepted RCR trainings.

Finally, in addition to the above offerings, many issues related to NSF's RECR component, "Treat and colleagues fairly and with respect," are covered from another angle by the Columbia Office of Equal Opportunity and Affirmative Action's New York Anti-Sexual Harassment Training (NYASH). This training is required of all personnel, including faculty, staff, researchers, librarians, and student workers and may be accessed [here](#). The NASH is mandated by New York State and New York City legislation.

B. Requirements for Individuals Who Previously Completed RCR Training

- Individuals who have previously completed one of the Columbia RECR courses (Morningside or CUMC) will not be required to repeat it for purposes of fulfilling the NSF requirements.
- Individuals who have previously completed CITI RECR training at another institution will be credited for the modules they have taken. However, since CITI allows institutions to select from among different RECR offerings, individuals must complete any Columbia-required modules that have not been previously completed.
- Individuals who have previously completed RECR training at another institution (other than CITI RCR training) will be required to complete one of the RCR training options at Columbia.

C. Monitoring Process

- a. Columbia University Information Technology provides RCT with regular reports identifying students and postdocs who receive either salary or stipend support for work on NSF research projects. GSAS will provide an annual list of NSF Graduate Research Fellows.
- b. RCT will send affected individuals and their PIs email notification of the individuals' obligation to complete training.
- c. Completion data for CITI and University courses will be collected regularly. Individuals who meet the training requirement through other methods will be required to submit evidence of compliance (e.g., course transcripts, certification from department).
- d. Reminders will be sent every two months to individuals and PIs for a total of 4 notifications. Individuals who are noncompliant after those 4 notifications will have their

information forwarded to the Vice President for Research Compliance, Training and Policy for further follow up.

- e. Failure to complete the training could result in the individual student's or postdoc's ineligibility to be funded by NSF projects.
- f. The monitoring process is described in greater detail in the attached Appendix A.

Questions

Questions regarding the NSF RCR requirement may be directed to the Office of Research Compliance and Training, 212-851-2897, or RCtraining@columbia.edu. Information is also available at <https://research.columbia.edu/responsible-conduct-research>

Appendix

Appendix A: *Tracking Process* is available upon request: RCtraining@columbia.edu.