

Swarthmore College's Responsible Conduct of Research Policy
for Students and Postdoctoral Researchers

Effective January 20, 2010

Swarthmore College embraces the notion that sound research is critical to the advancement of knowledge in all disciplines. Furthermore, as noted in the institution's mission statement

*Swarthmore students are expected to prepare themselves for full, balanced lives as individuals and as **responsible citizens** through exacting intellectual study*

To this end, Swarthmore College encourages Principal Investigators to educate themselves and their students in the responsible conduct of research (RCR)¹ such that they not only learn appropriate methodologies for undertaking research in their respective disciplines but also receive training and mentoring with regard to the ethics involved in undertaking such activities.

More specifically, in compliance with the recent federal requirement that

“each institution that applies for financial assistance from the [National Science] Foundation for science and engineering research or education 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,”²

the following individuals must demonstrate evidence of having successfully completed the CITI Responsible Conduct of Research training:

- (1) all Swarthmore undergraduates and postdoctoral researchers working on an NSF-funded project (whether receiving a stipend, salary, academic credit, or in a voluntary capacity); and
- (2) all Swarthmore faculty who are supervising undergraduates and/or postdoctoral researchers as part of his or her NSF-funded project.

Beginning with the Fall 2010 semester, this requirement must be met **before** beginning the NSF-associated research, or receiving the associated stipend or salary.

For instructions on how to access the CITI training, please contact Tania Johnson in Corporate, Foundation, and Government Relations (tjohnso2@swarthmore.edu). PIs, students, and postdocs must complete six core required modules and at least one elective module (or case study). There are two optional modules that may be required at the discretion of the faculty sponsor. CITI estimates that each module (including quizzes) will take 20-30 minutes to complete, though they may take longer. Please note that the on-line tutorials **do not** have to be completed in one sitting.

¹ According to the Office of Research Integrity's [Introduction to the Responsible Conduct of Research](#), RCR encompasses the following issues: (1) Data Acquisition, Management, Sharing and Ownership; (2) Conflict of Interest and Commitment; (3) Human Subjects; (4) Animal Welfare; (5) Research Misconduct; (6) Publication Practices and Responsible Authorship; (7) Mentor/Trainee Responsibilities; (8) Peer Review; and (9) Collaborative Science.

² America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science (COMPETES) Act (42 U.S.C. 1862o-1), Section 7009

National Science Foundation Responsible Conduct of Research (RCR) Policy³

1. Background

The responsible and ethical conduct of research (RCR) is critical for excellence, as well as public trust, in science and engineering. Consequently, education in RCR is considered essential in the preparation of future scientists and engineers. 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 Foundation for science and engineering research or education 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.”

The language specified below provides NSF’s implementation of Section 7009.

2. Institutional Responsibilities

- a. An 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 GPG Chapter II.C.1.e, institutional certification to this effect is required for each proposal.
- b. While training plans are not required to be included in proposals submitted to NSF, institutions are advised that they are subject to review, upon request.
- c. An institution must designate one or more persons to oversee compliance with the RCR training requirement.
- d. Institutions 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.⁴

³ From NSF’s January 2010 *Award and Administration Guide* (AAG), Chapter IV.B.
(http://www.nsf.gov/pubs/policydocs/pappguide/nsf10_1/aag_4.jsp#IVB)

⁴ There is a wide array of resources, in addition to the CITI online training, that can be used for education in the responsible conduct of research. NSF has funded two beta sites ([NSF Award 0936857](#) and [NSF Award 0936865](#)) to begin to provide an interactive community online resource on ethics education in science and engineering.

Responsible Conduct of Research Training Certification Form

The responsible and ethical conduct of research (RCR) is critical for the excellence of, as well as public trust in, science and engineering research. Consequently, an awareness and understanding of issues in RCR are essential to the education of future scientists and engineers. In the spirit of Swarthmore's commitment to ethical behavior and to meet the regulations of the National Science Foundation, all Swarthmore undergraduates and postdoctoral researchers who work with a faculty member on an NSF-funded project AND all Swarthmore faculty who are supervising undergraduates and/or postdoctoral researchers as part of his or her NSF-funded project must complete training in RCR.

PIs are responsible for ensuring that training has been completed before submitting paperwork to the Provost's Office or Business Office for processing of student stipends/salary or postdoc paychecks.

Swarthmore has identified the Collaborative Institutional Training Initiative (CITI, www.citiprogram.org) as providing an appropriate on-line training program. The program consists of required modules, optional modules, and a choice of case studies to be reviewed. At least one case study must be reviewed for certification.

Principal Investigator/Department: _____

Project Title: _____

Grant #: _____

Prior to beginning training, please discuss with your student or post-doc which case study (at least one is required) from the CITI training would be appropriate for your area of research, whether one or both optional modules should be completed, and your expectations for how he/she will demonstrate his/her mastery of the material covered.

CITI Collaborative Institutional Training Initiative

Learner Group:

- Physical Science Responsible Conduct of Research Course
- Social and Behavioral Responsible Conduct of Research Course

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Required Modules:

- Introduction to the Responsible Conduct of Research
- Research Misconduct
- Data Acquisition, Management, Sharing and Ownership
- Publication Practices and Responsible Authorship
- Mentor and Trainee Responsibilities
- Collaborative Research

Optional Modules:

- Peer Review
- Conflicts of Interest and Commitment

Elective Modules (Case Studies) completed [describe below]

If you are using additional materials to train your student in the RCR topics that may or may not be covered in the on-line modules, please briefly describe what materials you're using and for what specific topics. This information will be helpful for us to share with future faculty mentors in your discipline.

After training, please submit one copy of your student's or postdoc's CITI Completion Report, along with this signed form, to Tania Johnson in CFGR (grants office). **All faculty members who are supervising undergraduates and/or postdoctoral researchers as part of his or her NSF-funded project must also complete and submit a completion report and this form.** Existing and future grant funding to the College may be jeopardized by any exceptions. If you have any questions about this process, please contact Tania at 610-690-5713 or tjohnso2@swarthmore.edu.

Faculty Mentor's Name (please print)

Student's/Post-doc's Name (please print)

Faculty Mentor's Signature & Date

Student's/Post-doc's Signature & Date