

RIT's Compliance with the National Science Foundation's Responsible and Ethical Conduct of Research (RCR) Requirement

Statement of Principles

All Rochester Institute of Technology (RIT) undergraduate and graduate students as well as postdoctoral researchers who are supported by the National Science Foundation to conduct research will receive appropriate training and oversight in the responsible and ethical conduct of research (RCR) as required by the National Science Foundation.

This practice is consistent with RIT's other Policies and Procedures (<http://www.rit.edu/academicaffairs/Manual/>) such that all members of the RIT research community, including students, faculty, staff, and postdoctoral researchers, are expected to adhere to the highest ethical and professional standards as they pursue research and scholarly activities. Thus, all RIT community members engaged in research and scholarly endeavors must comply with the legal, regulatory, contractual, and ethical requirements established by the University, regulatory agencies, funding sources, and applicable professional organizations.

RCR can be taught and learned in many formats and particular issues of importance can vary from discipline to discipline. For this reason, it is the intent of RIT that RCR instruction is delivered from a suite of RIT resources on the subject, and that flexibility in RCR content and delivery is available that addresses the specific issues of various disciplines, reflects the length of time undergraduates work on a research project, and takes advantage of the faculty's mentoring relationship with students involved in supervising the conduct of research.

Background of the NSF Requirement

The America COMPETES Act of 2007 (*America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education and Science*) directed that the National Science Foundation (NSF) require institutions receiving NSF financial assistance for science and engineering research or education to implement mentoring and training in the responsible and ethical conduct of research for undergraduate and graduate students as well as postdoctoral researchers.

As of January 4, 2010, institutions like RIT must certify at the time of NSF proposal submission, the institution has a plan to provide appropriate training and oversight in the responsible and ethical conduct of research to undergraduates, graduate students, and postdoctoral researchers who are supported by NSF funded projects to conduct research. Institutional training plans must be available upon request and it is the responsibility of each institution to determine both the content and the delivery method for the training that will meet the institution's needs.

RCR Content Areas

Based on review of NSF resources on the subject, the following issues are the minimum areas that will comprise the responsible conduct of research training issues at RIT:

Research Misconduct

Conflict of Interest and Conflict of Commitment

Human Subjects in Research

Research Involving Animals

Data Acquisition, Management, Sharing and Ownership

Publication Practices, Citation, Plagiarism, and Responsible Authorship

Mentor/Trainee Responsibilities

Peer Review

Collaborative Science

While detailed knowledge of all these issues may not be applicable to all students and researchers; general awareness of these areas will be mandatory for all students and postdoctoral researchers conducting NSF supported research at RIT. Specific training and instruction in some of these issues will be provided by the Principal Investigator (PI) on particular issues relevant to the discipline or the research conducted during the course of the project.

This general RCR training does not replace specific instruction related to human subject research and research involving animals that is required for certain research in accordance with federal regulatory requirements. For more information on those requirements see RIT's Office of Human Research Protections (http://www.rit.edu/research/hsro/process_geninfo.php).

RIT Procedural Implementation Plan

After January 4, 2010, the Vice President for Research at RIT will certify in all new proposals submitted to NSF that RIT has a plan to provide appropriate training and oversight in the responsible and ethical conduct of research to undergraduates, graduate students, and postdoctoral researchers who are supported by NSF to conduct research. The Principal Investigator (PI) receiving the NSF award is the primary mechanism at RIT for enforcing compliance and delivering mentoring instruction on RCR issues to those participating or supported by the NSF project.

At the time of NSF award, there will added to the standard RIT Terms and Conditions Summary that the PI executes additional paragraphs in the form similar to Attachment A that will identify the multiple methods of delivery of RCR instruction at RIT for students and postdoctoral researchers working on the project, and make the PI aware of his/her role and duties in that

process. Specifically the PI will agree that: (1) he/she will promptly update the RAPID database to include all staff and students working on the research project; (2) all students conducting research on the project will receive an electronic or paper version of the RIT handout “An Introduction to Resources for the Responsible and Ethical Conduct of Research” and be encouraged to attend any periodically offered course on RCR; (3) as part of regular faculty supervision and mentoring of students on the project the PI will discuss any RCR issues that are related to the project with these students and postdoctoral researchers; (4) all graduate students and postdoctoral researchers working on the project will complete the online RCR tutorial module and will encourage all undergraduate or graduate student employees working on the project that they may also complete the RCR online tutorial, but it is not required; and (4) the PI will encourage all students working on the project to take, or ensure they have taken, academic courses that, in part, address some research methods, research conduct, or ethical issues in their own individual academic studies.

The online training module used is a general RCR course developed by the Collaborative Institutional Training Initiative (CITI) and will be available to the RIT community via [links on the RIT Office of Sponsored Research Services website](#) for students and postdoctoral researchers to complete this requirement.

Responsibilities Under the RCR Plan at RIT

Responsibility for compliance with the RIT plan to meet the NSF requirement of RCR training rests primarily with the PI. Accordingly, PI's will:

- Ensure confirmation and changes in the personnel list for the research project are promptly made in the RIT RAPID database, and comply with all the RCR requirements stated in the project Terms and Conditions Summary.
- Ensure completion of RCR online training for required students/postdoctoral researchers and perform further RCR training of students/postdoctoral researchers working on the project as part of regular project mentoring and supervision.

The Office of Vice President for Research and Sponsored Research Services shall:

- Certify the existence in NSF proposals of an RIT institutional plan for RCR education for students and postdoctoral researchers conducting research on NSF funded projects.
- Assist in developing and allocating RIT resources for completion of RCR training.
- Provide other RCR training and information resources to PI's through the PI Institute.
- Work with the PI's to ensure compliance with NSF RCR training requirements.
- Establish and provide administrative support for RCR education.
- Build collaborations with departments that have RCR academic expertise to grow RIT training resources and programs on these issues.

- Collect feedback and regularly assess efficacy and usefulness of RIT's RCR resources.

(Attachment A)

RIT's Responsible and Ethical Conduct of Research Certification for NSF funded projects

Language to be inserted in the standard RIT research project Terms and Conditions Summary executed by the PI in a NSF funded project.

- I understand that as PI, I am a vital part RIT's plan and resources to comply with the NSF's Responsible and Ethical Conduct of Research (RCR) requirement to provide appropriate training and oversight in the responsible and ethical conduct of research to undergraduates, graduate students, and postdoctoral researchers who are supported by NSF funded projects to conduct research. Towards this end:
 - (1) It is my responsibility to promptly and accurately update in the RIT RAPID database all staff and students working on the research project.
 - (2) I will ensure all students and postdoctoral researchers on this project receive an electronic or paper version of the RIT handout "An Introduction to Resources on the Responsible and Ethical Conduct of Research" available on the [RIT Sponsored Research website](#). I will also encourage my students and postdoctoral researchers to attend any periodically offered course on the Responsible and Ethical Conduct of Research offered at RIT.
 - (3) As part of my regular PI supervision of the project, I will discuss any RCR issues that are related to the project with my students and postdoctoral researchers working on the project. These mentoring discussions may consist of informal or formal meetings to discuss research topics related but not limited to: the conduct of the research project and writing about the results, specific ethics issues that arise in the project or in this type of research, preparing publication and presentations, responsible professional data management practices, and any other topics mentioned in the "Introduction to Resources on the Responsible and Ethical Conduct of Research."
 - (4) I will ensure all Graduate Research Assistants and postdoctoral researchers working on the project complete the online RCR tutorial module at www.citiprogram.org. I will encourage all undergraduate or graduate student employees working on the project that they may also complete the RCR online tutorial, but it is not required.
 - (5) I will encourage all students working on the project to take, or ensure they have taken, courses that, in part, address some research conduct or ethical issues in their individual academic studies.