

Responsible Conduct of Research at GSU

GSU View on RCR

GSU is committed to maintaining the high standards of integrity in research activities through the responsible and ethical conduct of its faculty, staff and students. RCR is a widely accepted set of ethical and professional standards for conducting research. RCR training is now part of funding requirements for federal agencies including the National Institutes of Health and the National Science Foundation. RCR is increasingly viewed as an essential component of research training, regardless of a researcher's source of funding. The purposes of RCR training are to promote the responsible conduct of research, discourage research misconduct and discourage questionable research practices.

Research Misconduct

Federal Regulations define Research Misconduct as fabrication, falsification, or plagiarism in proposing, performing, or reviewing research or in reporting research results. It does not include honest error or honest differences in interpretations or judgments of data. However, it is well appreciated by all that responsible conduct, as opposed to misconduct, encompasses many other aspects of ethical behavior in the practice of scientific research.

RCR Plan Intent

RCR plans should foster, integrate and provide RCR training at the highest standard of ethical and professional conduct for the culturally diverse and trans-disciplinary research community at GSU. RCR plans should also provide flexibility in content, delivery and the trainees' career stage. Core areas that can be addressed during instruction include data acquisition, management, sharing and ownership; mentor/trainee responsibilities; publication practices and responsible authorship; peer review; collaborative science; research misconduct; conflict of interest and commitment.

Online RCR Training

Collaborative Institutional Training Initiative Program has online RCR training that is recommended to be taken by all students, staff and faculty involved in research at GSU, regardless of whether the research is funded or non-funded. All graduate and undergraduate students participating in research with a funder that requires RCR training are required to take the RCR training with CITI and participate in mentored instruction to meet the funder's requirements. If your research involves human subjects or animals, you may need to complete additional CITI courses. CITI has a Course Completion Report where you can view your course completion history and obtain completion certificates.

CITI's Responsible Conduct of Research training includes disciplinary course offerings that cover the core norms, principles and rules governing the practice of responsible research. Participants will choose at least one of the disciplines specific courses listed below.

1. Biomedical Responsible Conduct of Research Course
2. Social and Behavioral Conduct of Research Course
3. Physical Science Responsible Conduct of Research Course
4. Humanities Responsible Conduct of Research Course

CITI Program Registration

Go to <https://www.citiprogram.org/> to register or login to the CITI program. Under *My Learner Tools for Governors State University*, click *Add a Course or Update Learner Groups*, scroll to *Responsible Conduct of Research*, choose the relevant *Learner Group* and Click *Submit*. The course modules will be added to your *Main Menu*. On your *Main Menu*, click your selected RCR course and begin to complete each module.

NSF RCR Plan Requirements

NSF requires GSU to be able to verify that undergraduate and graduate students who receive NSF funds for salary or stipends to conduct research on NSF grants will obtain RCR training. NSF anticipates that GSU will develop its RCR training programs in a manner that helps prepare the next generation of researchers, including the consideration of risks or other factors associated with student participation in research.

NSF recognizes that specific training needs may vary depending on specific circumstances of research or the specific needs of students intending to pursue careers in basic or applied science after completing their education. Therefore, it is the responsibility of GSU to determine both the content and the delivery method for the training that will meet GSU's specific needs for RCR training in all areas that NSF provides support. Furthermore, GSU must decide if development of content or pedagogical method is required, or if appropriate content and training can be provided from some existing sources or capabilities, and take appropriate action to implement its decisions.

NIH RCR Plan Requirements

NIH requires that all trainees, fellows, participants, and scholars receiving support through any NIH Research Training Grants, Individual Fellowship Awards, Career Development Awards (Institutional and Individual), Research Education Grants, Dissertation Research Grants or other grant programs with a training component that requires instruction in RCR as noted in the Funding Opportunity Announcement. It is expected that course attendance is monitored and that a certificate or documentation of participation is available upon course completion. NIH does not require certification of compliance or submission of documentation, but expects institutions to maintain records sufficient to demonstrate that NIH-supported trainees, fellows, and scholars have received the required instruction.

NIH Instructional Components

NIH recognizes that instruction in RCR occurs formally and informally in educational settings and that informal instruction occurs throughout the research training experience. The guidance provided below is directed at formal instruction in RCR. These practices have been incorporated into many of the best regarded programs of instruction in RCR.

1. **Format:** Substantial face-to-face discussions among the participating trainees/fellows/scholars/participants; a combination of didactic and small-group discussions (e.g. case studies); and participation of research training faculty members in instruction in responsible conduct of research are highly encouraged. A plan that employs only online coursework for instruction in responsible conduct of research will not be considered acceptable, except in special instances of short-term training programs (see below), or unusual and well-justified circumstances.

2. **Subject Matter:** While there are no specific curricular requirements for instruction in responsible conduct of research, the following topics have been incorporated into most acceptable plans for such instruction:
 - conflict of interest – personal, professional, and financial
 - policies regarding human subjects, live vertebrate animal subjects in research, and safe laboratory practices
 - mentor/mentee responsibilities and relationships
 - collaborative research including collaborations with industry
 - peer review
 - data acquisition and laboratory tools; management, sharing and ownership
 - research misconduct and policies for handling misconduct
 - responsible authorship and publication
 - the scientist as a responsible member of society, contemporary ethical issues in biomedical research, and the environmental and societal impacts of scientific research
3. **Faculty Participation:** Training faculty and sponsors/mentors are highly encouraged to contribute both to formal and informal instruction in responsible conduct of research. Informal instruction occurs in the course of laboratory interactions and in other informal situations throughout the year. Training faculty may contribute to formal instruction in responsible conduct of research as discussion leaders, speakers, lecturers, and/or course directors. Rotation of training faculty as course directors, instructors, and/or discussion leaders may be a useful way to achieve the ideal of full faculty participation in formal responsible conduct of research courses over a period of time.
4. **Duration of Instruction:** Instruction should involve substantive contact hours between the trainees/fellows/scholars/participants and the participating faculty. Acceptable programs generally involve at least eight contact hours. A semester-long series of seminars/programs may be more effective than a single seminar or one-day workshop because it is expected that topics will then be considered in sufficient depth, learning will be better consolidated, and the subject matter will be synthesized within a broader conceptual framework.
5. **Frequency of Instruction:** Reflection on responsible conduct of research should recur throughout a scientist's career: at the undergraduate, post-baccalaureate, predoctoral, and faculty levels. Institutional training programs and individual fellows/scholars are strongly encouraged to consider how to optimize instruction in responsible conduct of research for the particular career stage(s) of the individual(s) involved. Instruction must be undertaken at least once during each career stage, and at a frequency of no less than once every four years. It is highly encouraged that initial instruction during predoctoral training occurs as early as possible in graduate school. Individuals at the early career investigator level, including mentored K awardees and K12 scholars, must receive instruction in responsible conduct of research at least once during this career stage. Senior fellows and career award recipients, including F33, K02, K05, and K24, awardees may fulfill the requirement for instruction in responsible conduct of research by participating as lecturers and discussion leaders. To meet the above requirements, instruction in responsible conduct of research may take place, in appropriate circumstances, in a year when the trainee, fellow or career award recipient is not actually supported by an NIH grant.