

North Dakota State University

Policy Manual

SECTION 348

INSTRUCTION IN THE RESPONSIBLE CONDUCT OF RESEARCH

SOURCE: NDSU President

1.0 General Principles.

- 1.1 The responsible 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. Federal law (Section 7009 of the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science (COMPETES) Act of 2007 (42 U.S.C. 1862o-1)) and federal sponsors currently require appropriate training and oversight in the responsible and ethical conduct of research for students and researchers.

2.0 Applicability.

- 2.1 NSF - 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. This requirement includes subrecipient institutions.

The CHIPS and Science Act of 2022 expands the requirement for responsible conduct in research training to include faculty and other senior personnel on Foundation awards.

- 2.2 NIH - All trainees, fellows, participants, and scholars receiving support through any National Institutes of Health (NIH) training, career development award, research education grant, and dissertation research grant; or as otherwise stated in the relevant funding opportunity announcement must receive instruction in responsible conduct of research.
- 2.3 USDA-NIFA – All program directors, faculty, undergraduate students, postdoctoral researchers, and any staff participating in the awarded research project must receive appropriate training and oversight in the responsible and ethical conduct of research. Documentation of such training must be maintained and provided to NIFA upon request.
- 2.4 The Vice President for each unit or the Dean of each college, as applicable, has the discretion to require RCR training for other individuals in addition to those identified in 2.1 and 2.2. RCR training is strongly recommended for all NDSU faculty, staff or students engaged in research. "Unit" is intended to mean those divisions that don't have a Dean typically, such as, but not necessarily limited to ND EPSCoR and Upper Great Plains Transportation Institute (UGPTI).

3.0 Educational Plans.

- 3.1 Elements of Researcher RCR Plans - General topics (such as responsible authorship and publication) are relevant to all research, while special topics (such as use of vertebrate animal subjects) would be relevant to select research or disciplinary practices. Plans must

also include an indication as to the frequency of training required as well as when training would expire. Most programs would include the following topics:

- conflict of interest - personal, professional, and financial
- conflict of commitment - in allocating time, effort, or other research resources
- policies regarding human subjects, live vertebrate animal subjects in research, and safe laboratory practices
- mentor/mentee responsibilities and relationships
- safe research environments (e.g. those that promote inclusion and are free of sexual, racial, ethnic, disability and other forms of discriminatory harassment)
- collaborative research including collaborations with industry and investigators and institutions in other countries
- peer review, including the responsibility for maintaining confidentiality and security in peer review
- data acquisition and analysis; laboratory tools (e.g. tools for analyzing data and creating or working with digital images); recordkeeping practices, including methods such as electronic laboratory notebooks; 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
- research security risks, as well as federal export control, disclosure, and reporting requirements.

3.2 For applicable NIH awards, the RCR plan must incorporate the following five specific instructional components:

- **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
- **Subject Matter:** The curriculum of most acceptable plans includes the subject matter listed in 3.1 above
- **Faculty Participation:** faculty are highly encouraged to participate in and contribute to formal and informal instruction in ways that allow them to serve as effective role models for their trainees, fellows and scholars
- **Duration:** the duration of the instruction is recommended to be at least eight contact hours over a period of time
- **Frequency:** instruction should be appropriate to the career stage of the individuals receiving training and must be undertaken at least once during each career stage, and at a frequency of no less than once every four (4) years

3.2 Researchers may choose from the following courses and training offerings to help satisfy RCR requirements.

- Qualifying courses offered at NDSU (see below for how to obtain qualification).
- The Collaborative Institutional Training Initiative (CITI) online RCR training (<https://www.citiprogram.org>.)
- Training offered by the Graduate School and/or Research Integrity and Compliance
- Training developed by the Principal Investigator (PI) or other RCR experts

3.3 Research Integrity and Compliance (RIC) will designate courses that qualify as satisfying appropriate RCR content. Faculty or staff may request to have existing or newly proposed courses, workshops, or other programs designated as qualifying RCR courses. The criteria and process for obtaining this approval is:

- Initiate course qualification with RCR by providing a request letter and the class syllabus or the workshop/program description
- RIC will review and approve courses, workshops, and other programs that satisfy RCR requirements. RIC will maintain a record of qualifying courses
- Significant changes to the course syllabus or description should be communicated to RIC
- Re-qualification is required every four years

3.3 Federal agencies, including the Office of Research Integrity, recommend incorporating RCR training throughout the curricula, in a variety of formats. Online courses may not be sufficient as the sole means of providing RCR education, and these should be supplemented with didactic and small-group discussions. Multiple approaches to training are recommended to produce the best results.

4.0 Roles and Responsibilities for Compliance.

4.1 Researcher Responsibilities – All researchers are expected to engage in responsible conduct of research training as an essential component of promoting research excellence.

PIs are responsible for:

- Identifying those individuals working on their sponsored projects who must receive RCR training
- Determining the most appropriate format, content and instruction for RCR training in line with the sponsor requirements
- Providing documentation that RCR requirements have been satisfied upon request.
- Adhering to the funder/sponsor RCR monitoring, tracking, and reporting requirements in addition to complying with NDSU requirements
- All training plans and documents are subject to review upon request of the President, Provost, a Vice President, University Legal Counsel, or any other designees, federal agencies or other sponsoring entities

4.2 The Office of Sponsored Programs Administration (SPA), as the Authorized Organizational Representative for NDSU, shall provide the necessary certification to the NSF that NDSU has 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.

4.3 Prior to finalizing an NSF, USDA NIFA, or applicable NIH award subject to the RCR Requirements, SPA will provide the Principal Investigator (PI) with a reminder notice of the RCR requirements.

4.4 RIC staff will periodically select a random sample of applicable awards for routine audit of compliance with funding agency RCR requirements.

5.0 Consequences of Noncompliance.

- 5.1 In addition to any institutional or State Board of Higher Education consequences for failing to comply with the RCR requirements, NDSU or individuals at NDSU can be debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded from requesting or receiving funding from the NSF or other federal agencies. Other possible actions include letters of reprimand, ban from serving as reviewers, fines and restitution.

Contact

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HISTORY:

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