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 (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 Students (undergraduates, graduate students, and post-doctoral researchers) “supported” by the National Science Foundation (NSF) for science and engineering research awards must be provided with appropriate training and oversight in the responsible and ethical conduct of research. This requirement is effective with proposals submitted to the NSF on or after January 4, 2010, and includes subrecipient institutions. (*NOTE: Use of the term “supported,” is not restricted to financial remuneration. "Supported" can be access to equipment, supplies or lab space by paid students or even volunteers conducting research. Students supported by funds other than NSF but involved in research sponsored by the NSF are considered supported by the NSF and, thus, subject to training requirements.)

2.2 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 must receive instruction in responsible conduct of research. This requirement is effective with new and renewal applications submitted to NIH on or after January 25, 2010, and for all continuation (Type 5) applications with deadlines on or after January 1, 2011.

2.3 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. "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 Each college and department (or Vice President, as applicable) is responsible for determining the need for and developing a plan for training in the responsible conduct of research, as well as developing content and determining the most effective delivery mechanism appropriate for each discipline, tailored to issues and practices that are
relevant. 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
- 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

3.2 NDSU currently subscribes to the Collaborative Institutional Training Initiative (CITI), which offers online modules on discipline-specific RCR training. Units, colleges and departments shall require completion of the appropriate modules by all individuals identified in Section 2.1 for NSF funding, Section 2.2 for NIH funding, and others as identified in accordance with Section 2.3 as a supplement to the unit, college or department training plan. The CITI modules are accessed at [https://www.citiprogram.org](https://www.citiprogram.org).

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 It is the responsibility of each college (or Vice President unit, as applicable) to determine how best to ensure effective and appropriate education in responsible and ethical research practices.

4.2 The Dean of each college (or Vice President of a Unit, as applicable) shall be the NDSU designate responsible for overseeing compliance with the RCR training requirement within their respective college or unit.

4.3 Completion of training shall be appropriately monitored by the Deans (or Vice President, as applicable) or their designees and documented by departments or units to verify compliance with NSF, NIH or other sponsoring agency RCR requirements. All training plans and documents are subject to review upon request of the President, Provost, a Vice President, General Counsel, or any other designees, federal agencies or other sponsoring entities.

4.4 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. Prior to finalizing an NSF award subject to the RCR Requirements, SPA will provide the Principal Investigator (PI) with a reminder notice of the NSF 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

Kelly A. Rusch, Ph.D., P.E.
Research Integrity Officer (RIO)
Responsible Conduct of Research Program
Kelly.Rusch@ndsu.edu
701-231-6542

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