Responsible Conduct of Research Training Plan

Southwestern Oklahoma State University

Background

The America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education and Science (COMPETES) Act was signed into law in August 2007. Section 7009 requires that each institution applying for financial assistance from the National Science Foundation (NSF) for science and engineering research or education must 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 any capacity within the proposed research project. These individuals are referred to collectively as "Research Participants" below.

In 2009, the National Institutes of Health (NIH) released Notice Number NOT-OD-IO019 which updated their requirement for instruction in the responsible conduct of research. The updated NIH policy requires that all trainees, fellows, participants, and scholars receiving support through any NIH training, career development award (individual or institutional), research education grant, and dissertation research grant must receive instruction in the responsible conduct of research.

At Southwestern Oklahoma State University (SWOSU), trainees, fellows, undergraduate students, graduate students, and postdoctoral researchers participating in any capacity within the proposed NIH or NSF research or education project are to be considered as "Research Participants" regarding training and oversight in the responsible and ethical conduct of research.

Key features

--Each institution must have an education plan

--The plan is not required to be included in each proposal, but is subject to NIH and NSF review

--The plan must include face-to-face instruction

--0ne or more persons must oversee compliance

--There must be verification that each "Research Participant" has received the training

Applicability

Proposals submitted to NSF on or after January 4, 2010

Proposals submitted to NIH on or after January 25, 2010 and for continuation applications submitted on or after January 1, 201 1

Southwestern Oklahoma State University Plan

Southwestern Oklahoma State University (SWOSU) will meet this requirement as described below.

<u>Participation in long-term training and research education programs lasting longer than three months</u> will meet the requirement by research participant's attendance at two 4hour workshops for a minimum total of 8 hours of training. These workshops will be provided as needed at the start of each semester (fall, spring, and summer) for instruction in responsible conduct of research. The curriculum titled Responsible Conduct of Research Training: Making Sense of Complex Problems from the University of

Oklahoma Center for Applied Social Research will be used. This training focuses on ethical decision making with regards to protection of human subjects, conflicts of interest, data management, authorship and publication practices, peer review, collaboration, mentor-mentee relationships, protection of animal subjects, and research misconduct. All research participants will attend and actively participate in the training. A certificate of completion will be issued to research participants who satisfactorily complete at least 8 hours of responsible conduct of research training.

Students in this category may also meet the requirement by completing the course CHEM2012: Scientific Ethics. A benefit to this course is that the student will receive course credit on their transcript in addition to meeting NIH/NSF requirements.

In addition, it is expected that students involved in these programs will receive informal instruction on relevant topics specific to their project from their mentor during the course of the training or program.

Participation in short-term training and research education programs lasting three or fewer months will meet the requirement as appropriate to the short-term program. For example, INBRE summer students will be expected to participate in the Weekly Research-related Enrichment meeting that covers Ethics in science and r search.

In addition, it is expected that students involved in these programs will receive informal instruction on related topics specific to their project from their faculty mentor during the course of the training or program.

Students in this category may also meet the requirement by using the Public Access Domain of the Responsible Conduct of Research (RCR) Course provided by the Collaborative Institutional Training Initiative (CIT I). CITI is a web-based training tool that has been utilized by over 1000 participating institutions and facilities from round the world to provide training in a broad range of research topics including, but not limited to, the Protection of Human Subjects, Health Information Privacy and Security, Laboratory Animal Welfare, and the Responsible Conduct of Research. In addition, it is expected that students involved in these programs will receive informal instruction o related topics specific to their project from their faculty mentor during the course of the training or program.

To use CITI for RCR Training at SWOSU, the Research Participant will:

1. Access the CITI home page (https://www.citiprogram.org/)
2. Select the RCR Course link at the top of the page
3. Select the link entitled "Continue to register for the RCR course"
4. Submit a Username, Password, and E-mail address
5. Provide required background information
6. Select the Training Course for the appropriate discipline area from the following:
   - Biomedical
   - Social and Behavioral
   - Physical Science
   - Humanities
   - Engineering

7. Enter the selected Training Course, complete each module, and pass all tests covering the material of each module with a minimum aggregate score of 80%. Required modules for each Training Course include:

- Introduction to Responsible Conduct of Research
- Research Misconduct: (fabrication or falsification of data including image manipulation, plagiarism). The meaning of research misconduct and the regulations, policies, and guidelines that govern research misconduct in PHS-funded institutions, includes topics such as fabrication, falsification, and plagiarism; error vs. intentional misconduct; institutional misconduct policies; identifying misconduct; procedures for reporting misconduct; protection of whistleblowers; and outcomes of investigations, including institutional and Federal actions.
- Data Acquisition, Management, Sharing, and Ownership: Accepted practices for acquiring and maintaining research data. Proper methods for record keeping and electronic data collection and storage in Scientific research. Includes defining what constitutes data; keeping da notebooks or electronic files; data privacy and confidentiality; data selection, retention, sharing, ownership, and analysis; data as legal documents a intellectual property, including copyright laws.
- Publication Practices and Responsible Authorship: The purpose and importance of scientific publication, and the responsibilities of the authors. Includes topics such as collaborative work and assigning appropriate credit, acknowledgments, appropriate citations, repetitive publications, fragmentary publication, sufficient description of methods, corrections and retractions, conventions for deciding upon authors, author responsibilities and the pressure to publish.
- Peer Review: The purpose of peer review in determining merit for research funding and publications. Includes topics such as, the definition of peer review, impartiality, how peer review works, editorial boards and ad hoc reviewers, responsibilities of the reviewers, privileged information, and confidentiality.
- Mentor and Trainee Responsibilities: The responsibilities of mentors and trainees in predoctoral and postdoctoral research programs. Includes the role of a mentor, responsibilities of a mentor, conflicts between mentor and trainee, collaboration and competition, selection of a mentored abusing the mentor/trainee relationship.
- Animal Welfare (if applicable to discipline). Issues important to conducting research involving animals. Includes topics such as definition of research involving animals, ethical principles for conducting research on animals, Federal regulations governing animal research, institutional animal care and use committees, and treatment of animals.
- Conflicts of Interest and Commitment: The definition of conflicts of interest and how to handle conflicts of interest. Types of conflicts encountered by researchers and institutions. Includes topics such as conflicts associated with collaborators, publication, financial conflicts, obligations to other constituencies, and other types of conflicts.
- Collaborative Research: Research collaborations and issues that may arise from such collaborations. Includes topics such as setting ground rules early in the collaboration, avoiding authorship disputes, and the sharing of materials and information with internal and external collaborating scientists.

- Human-Subjects: (if applicable to discipline) Issues important in conducting research involving human subjects. Includes topics such as toe definition of human subjects research, ethical principles for conducting human subjects research, informed consent, confidentiality and privacy of data and patient records, risks and benefits, preparation of a research protocol, institutional review boards, adherence to study protocol, proper conduct of the study, and special protections for targeted populations, e.g., children, minorities, and the elderly.

8. Print a copy of the Completion Report and submit it to the Office of Sponsored Programs (OSP) at SWOSU.

Responsibilities

Each Research Participant must satisfactorily complete RCR training prior to participating within an NIH or NSF grant.

The Principal Investigator, in particular, is responsible for providing and updating OSP with the names of all Research Participants within his/her research project, for notifying all Research Participants of the RCR Training requirements, and for ensuring that the training is completed by Research Participants prior to beginning work on an NIH or NSF grant.

The Office of Sponsored Programs (OSP) is responsible for the general dissemination and administration of this policy. OSP will include information about the RCR Training requirement with each new NIH and NSF account. When a Research Participant successfully completes the specified RCR course, OSP will receive notification. OSP will maintain a list of Research Participants supported by NIH and NSF grants and verify that each Research Participant has completed the appropriate RCR course.

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