

RESPONSIBLE CONDUCT OF RESEARCH TRAINING PROCEDURES

To meet the requirements of the America COMPETES Act of 2007, Elon University undergraduate and graduate students supported by research funds from NSF and/or by training funds from NIH are required to participate in Responsible Conduct of Research (RCR) training.

Principal Investigators (PI) are responsible for ensuring RCR training for students in the project-applicable areas in accordance with the subject discipline. PI/PD's will complete one RCRT form for each student who will be working on an NSF or NIH funded grant project. The completed form should be sent to the Office of Sponsored Programs, 2620 CB, within 60 days of hire.

For further information, contact Bonnie Bruno, Director of Sponsored Programs at bbruno2@elon.edu, (336) 278-6603 or Jenny Chapman, Grants Coordinator for Sponsored Programs at jchapman7@elon.edu, (336) 278-6614.

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Background:

Elon University is committed to the ethical conduct of research and is in compliance with section 7009 of the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education and Science (America COMPETES) Act which requires that an institution certify that it has a plan in place to provide appropriate training and oversight in the responsible and ethical conduct of research for undergraduate students, graduate students, and postdoctoral researchers participating in National Science Foundation or National Institutes of Health funded research projects submitted on or after January 4, 2010.

Application:

The Principal Investigator (PI) will be responsible for providing appropriate RCR training to students who are working on the PI's NSF and/or NIH funded projects.

RCR Training Plan:

The Office of Research Integrity (ORI) in the US Department of Health and Human Services is the federal agency charged with the responsibility of oversight for the responsible conduct of research (RCR). The ORI encourages researchers to make a special effort to understand, discuss, and teach others about the responsible conduct of research. A multitude of educational resources are available through the ORI website to assist departments, programs, and PIs in providing additional RCR training to students.

To meet the mandate, Elon offers a comprehensive RCR web-based training program through the Collaborative Institutional Training Initiative (CITI) administered by the University of Miami. Objectives of the RCR training are to encourage best practices in the conduct of research and scientific investigations and to foster an ability to recognize an ethical choice and the ability to make a principled decision. Modules are tailored for the four broad disciplinary categories of biomedical research, social and behavioral research, physical science, and humanities. The RCR curriculum includes the following modules that are required for all undergraduate and graduate students employed on NSF and NIH funded projects:

- **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 data notebooks or electronic files; data privacy and confidentiality; data selection, retention, sharing, ownership, and analysis; data as legal documents and 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, acknowledgements, appropriate citations, repetitive publications, fragmentary publications, 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/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 mentor, and abusing the mentor/trainee relationship.
- **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 Science:** 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:** *Supplemental Module only required if working with human subjects.* Issues important in conducting research involving human subjects. Includes topics such as the 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 study, and special protections for targeted populations, e.g., children, minorities, and the elderly.

Only those instructional areas applicable to the grant funded research project are required to be covered. For example, a chemistry project might not involve the use of human subjects; the human subjects module would therefore not be required as part of the training.

The CITI RCR course may be accessed at www.citiprogram.org. Users should:

1. Register.
2. Log in and affiliate with Elon University.
3. Add a course or update the learner group.
4. Select Question 2: Responsible Conduct of Research.
5. Select Student Responsible Conduct of Research Course. *NOTE: Be sure “Not at this time” is selected and check marks are removed from all other questions.
6. Select Submit at the bottom of the page.

Modules may be taken at the learner's pace by logging out and returning at a later date, but all applicable modules must be completed within sixty (60) days of hire on an NSF or NIH supported project.

Administration:

Responsibility for compliance with the mandate rests primarily with PI's. Accordingly, they will:

- ~Identify students to be hired on NSF or NIH funded projects and inform the Office of Sponsored Programs of the hires within the first week of employment
- ~Ensure completion of RCR training for required students, and return the completed RCRT form for each student to the OSP within 60 days of employment.

The Office of Sponsored Programs will:

- ~Verify compliance with RCR training requirements
- ~Keep current on federal regulations pertaining to this policy
- ~Assess the program and make recommendations as appropriate

RESPONSIBLE CONDUCT OF RESEARCH TRAINING FORM FOR STUDENTS

PI Name:		Grant Title:	
Student Name:		Date:	

Your signature below indicates this student has received basic training in Responsible Conduct of Research for Students using the following method:

	CITI Training
	Instructor Training (specify instructor):
	Other (specify):

Certified by:

PI Name:	
Signature:	
Today's Date:	

This form is required for students hired on an NSF or NIH grant. Completed forms should be returned to the Office of Sponsored Programs, 2620 CB or electronically to Jenny Chapman at jchapman7@elon.edu within 60 days of hiring.