

# Appalachian State University's Plan for Training Students in the Responsible Conduct of Research

## Background

Appalachian State University is committed to the ethical conduct of research and scholarship regardless of discipline or source of research support. The university recognizes that instruction in the ethical conduct of research and scholarship is a vital part of the education of all graduate students and undergraduate students participating in research.

The federal government has enacted legislation emphasizing the importance of instruction in the ethical conduct of research. The America COMPETES Act, signed into law in 2007, contained guidelines requiring that all proposals to the National Science Foundation (NSF) include a plan for "appropriate training and oversight in the responsible and ethical conduct of research" as well as a description of the mentoring activities provided for postdoctoral researchers. Effective January 4, 2010, the NSF requires the authorized organizational representative to certify that the institution has a plan "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." Training plans do not need to be included in submitted proposals, but are subject to review upon request by NSF. Training plans must include a system to verify that training has occurred.

## 1. Scope of Plan

Although training in the responsible conduct of research and scholarship is recommended for all students, our current plan requires training in the responsible conduct of research (RCR) for undergraduates, graduate students and postdoctoral researchers who are supported by the NSF. The term "supported" is defined by ASU as any student/postdoctoral researcher who receives salary support, obtains funding for research expenses, or volunteers his/her time and effort on an NSF funded project.

## 2. Certification and Monitoring

All principal investigators (PIs) submitting proposals to the NSF will be notified of the RCR training requirements required by this plan through an RCR training document (Appendix A) provided by staff from Research and Sponsored Programs (ORSP).

When an NSF project is awarded, staff in ORSP will notify Research Protections. Staff from Research Protections will arrange to meet with the PI within one week of award notification to review the training requirements of this plan. At this meeting, the PI will confirm compliance with this plan by signing an Agreement to Provide and Monitor RCR Training (Appendix B).

After a student completes RCR training, the principal investigator will complete an RCR Training Certification Form (Appendix C) and submit it to Research Protections for record keeping. Staff from Research Protections will conduct semiannual audits to ensure compliance with this plan.

## 3. Training Content

Although there is no single best way to conduct research or pursue creative activities, several common core instructional areas in RCR have been identified:

- Data Acquisition, Management, Sharing, and Ownership
- Human Subjects
- Animal Subjects
- Conflicts of Interest and Commitment

- Peer Review
- Collaboration
- Publication/Authorship
- Mentorship
- Research Misconduct
- Lab Safety

Faculty PIs have the primary responsibility for ensuring that students participating in their NSF-funded research complete the required RCR training. ASU's RCR training will include the following components:

- Each student must successfully complete an RCR course provided online by the Collaborative Institutional Training Initiative (CITI) ([www.citiprogram.org](http://www.citiprogram.org)). Students can choose either the Biomedical RCR course, Social and Behavioral RCR course, Physical Science RCR course or the Humanities RCR course. These courses provide an introduction to the responsible conduct of research, research misconduct, data management, publication practices and responsible authorship, peer review, responsible mentoring, conflicts of interest and commitment and collaborative research. Completing a CITI RCR course takes approximately 3 hours. Instructions for accessing the training can be found on Appalachian's RCR website: [www.orsp.appstate.edu/forms/compliance/rcr\\_citi\\_training.pdf](http://www.orsp.appstate.edu/forms/compliance/rcr_citi_training.pdf). After successfully completing a CITI RCR course, a student must print a completion report and submit it to the PI for verification.
- Each participating student must receive experiential training (e.g., facilitated discussion, discipline specific mentoring) on at least three of the core instructional areas (listed above) that are appropriate to the research topic or discipline. The topic of research misconduct must be one of the selected topics. In addition, the topic of human subject research must be a selected topic if human subjects are involved in the research and the topic of animal subjects included if animal use is part of the research.

#### 4. Timing of Training

NSF-supported students will complete the required RCR training by the last day of classes during the first full semester of their participation in NSF-supported research.

#### 5. Compliance with the RCR training requirement

The Dean of Research and Graduate Studies is responsible for overseeing compliance with Appalachian's Plan for Training Students in the Responsible Conduct of Research with support from the Associate Dean of the Graduate School and Research Protections staff. Non-compliance with this plan endangers Appalachian's ability to receive federal funding.

#### 6. Resources

Research Protections will maintain a list of RCR training resources on Appalachian's RCR website ([www.orsp.appstate.edu/compliance/conduct](http://www.orsp.appstate.edu/compliance/conduct)), coordinate campus RCR instructional resources and disseminate training opportunities.

#### 7. Approval and Amendments to Plan

The Provost is the responsible official for approving Appalachian State University's Plan for Training Students in the Responsible Conduct of Research. The Chief Research Officer may amend this plan at any time after consultation with the University Research Council. Any changes to the plan will be sent to faculty with active NSF awards and will be posted on the RCR website. This plan will be reviewed by the University Research Council annually by November 1 of each year.

Appendix A

## Plan for Training Students in the Responsible Conduct of Research (RCR)

### Why do we have this training plan?

The NSF requires the authorized organizational representative to certify that the institution has a plan **“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.”**

### What training is required?

The PI is responsible for ensuring that students supported by their NSF-funded research complete the required RCR training. Each supported student must complete:

1. An RCR course provided online by the Collaborative Institutional Training Initiative (CITI), and
2. Experiential training (e.g., facilitated discussion, discipline specific mentoring) on at least 3 of 10 identified instructional areas appropriate to the research topic or discipline. One of the topics must be a discussion of research misconduct, human subject research if human subjects are involved in the research, and animal subjects if animal use is part of the research.

### How do we verify that the training has occurred?

1. When an NSF project is awarded, staff from Research Protections will arrange to meet with the PI within one week of award notification to review the training requirements of this plan. At this meeting, the PI will affirm their responsibility to provide and monitor training by signing an “Agreement to Provide and Monitor RCR Training.”
2. After a student completes RCR training, the principal investigator will complete an RCR Training Certification Form and submit it to Research Protections for record keeping.

### Want more information?

A copy of our training plan is on the RCR website: [www.orsp.appstate.edu/compliance/conduct](http://www.orsp.appstate.edu/compliance/conduct)  
Contact staff in Research Protections (Julie Taubman or Robin Tyndall) for more information.

Appendix B

### Agreement to Provide and Monitor Responsible Conduct of Research (RCR) Training

As the principal investigator for the NSF project, “    Title    ”, (#    ) (ASU #    ), I accept responsibility for ensuring that all undergraduate students, graduate students and any postdoctoral researchers supported by this NSF-funded research project (“the NSF project”) complete the required RCR training stipulated in Appalachian State University’s Plan for Training Students in the Responsible Conduct of Research (“the Plan”).

I understand the following:

- The term “supported” is defined as any undergraduate or graduate student/postdoctoral researcher who receives salary support, funding for their research expenses, or volunteers his/her time and effort on the NSF funded project.
- The required training is comprised of the ASU designated online RCR course and experiential training (e.g., facilitated discussion, discipline specific mentoring) that includes at least three of the ten identified instructional areas in the Plan which are appropriate to the research topic or discipline. The topic of research misconduct must be one of the selected topics. In addition, the topic of human subject research must be a selected topic if human subjects are involved in the research and the topic of animal subjects selected if animal use is part of the research.
- Each supported student must complete the required training by the last day of classes during the first full semester of their participation in NSF-supported research.
- After a student completes the required RCR training, I will complete an RCR Training Certification Form and submit it to Research Protections for record keeping.
- Non-compliance with this plan jeopardizes Appalachian’s ability to receive federal funding.

Agreed and Accepted:

\_\_\_\_\_  
Principal Investigator

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Research Protections Staff Member

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

Appendix C

## Appalachian State University Responsible Conduct of Research Training Certification Form

Name of Student or Postdoctoral Researcher: \_\_\_\_\_

Dates of Participation in the Research: \_\_\_\_\_

PI Name: \_\_\_\_\_

Department: \_\_\_\_\_

NSF Grant Number \_\_\_\_\_ Title \_\_\_\_\_

Provide information below on whether training was provided in the following instructional areas, the method of delivery (e.g., seminar, training by the investigator, etc.), or a reason why training in an instructional area was not provided. Note: research misconduct, human subject research and animal subjects must be covered through experiential component training (e.g., facilitated discussion, discipline specific mentoring) if the topic is relevant to the research project. The following codes may be helpful:

**NHSR:** Project does not involve Human Subjects.

**NAW:** Project does not involve Animal Care or Use.

**NA:** Not applicable to discipline.

**CITI:** online training by Collaborative Institutional Training Initiative

<b>RCR Instructional Area</b>	<b>Method of delivery/reason training not provided</b>
Data Acquisition, Management, Sharing, and Ownership	<i>CITI</i>
Conflict of Interest and Commitment	<i>CITI</i>
Human Subjects	
Animal Subjects	
Research Misconduct	<i>CITI</i>
Publication Practices and Responsible Authorship	<i>CITI</i>
Mentor and Trainee Responsibilities	<i>CITI</i>
Peer Review	<i>CITI</i>
Collaborative Science	<i>CITI</i>
Lab Safety	

PI Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Date: \_\_\_\_\_

Student signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Date: \_\_\_\_\_

Please submit a hard copy of your completed and signed form to the Office of Research Protections, Research and Sponsored Programs, 384 John Thomas. If you are certifying a group of students who all received the same training, request a group form from Research Protections. For any additional questions, contact Research Protections: Julie Taubman, [taubmanjl@appstate.edu](mailto:taubmanjl@appstate.edu), 262-7981 or Robin Tyndall, [tyndallrs@appstate.edu](mailto:tyndallrs@appstate.edu), 262-2692, or consult Appalachian's RCR website: [www.orsp.appstate.edu/compliance/conduct](http://www.orsp.appstate.edu/compliance/conduct)