

## **Neuroscience Program Responsible Conduct of Research Training Requirements**

### **1. Overview:**

Training in the Responsible Conduct of Research (RCR) is essential for future scholars and professionals. An understanding of the issues concerning the conduct of research in an increasingly complex world has become critical in successfully navigating the research landscape. To help prepare Michigan State University graduate students for their future scholarly work, the Neuroscience Program has developed a plan for providing the foundation of responsible conduct has been developed in coordination with the Graduate School, the Vice President for Research and Graduate Studies Office, and college associate deans for graduate education. The plan is predicated on the principles that a basic understanding of issues is necessary through didactic training and a periodic reinforcement of the principles through discussion. Completion of this training will provide a foundation for Neuroscience graduate students pursuing a career in research and will meet the federal agency granting requirements.

### **2. Initial Training: First Year Ph.D. students;**

All first year Ph.D. students will complete the following four Collaborative Institutional Training Initiative (CITI) online modules (<https://www.citiprogram.org/members/index.cfm?pageID=50>) within the first year of enrollment in the Neuroscience program: *Completion of this requirement will be tracked in SABA.*

1. Introduction to the Responsible Conduct of Research
2. Authorship
3. Plagiarism
4. Research Misconduct

### **3. Continued Training: Second Year Ph.D. students:**

All second year Ph.D. students will complete 3 additional MSU online training modules, to be selected from the list below (<https://www.citiprogram.org/members/index.cfm?pageID=50>). *Completion of this requirement will be tracked in SABA.*

1. CITI Collaborative Research
2. CITI Conflicts of Interest
3. CITI Data Management
4. CITI Financial Responsibility
5. CITI Mentoring
6. CITI Peer Review
7. IACUC Tutorial for Animal Care Training (in <http://Train.ORA.msu.edu>)
8. Human Research Protection/ IRB Certification (in <http://Train.ORA.msu.edu>)
9. Rigor and Reproducibility Course (in production)

### **4. Annual Refresher Training:**

Starting in year 3, all Ph.D. doctoral students must complete 3 hours of annual refresher training. Annual refresher training will include 2 hours of discussion-based training (see below) and 1 online course each year, not including the 7 required in basic training described above. *Completion of this requirement will be recorded by the Neuroscience Program in GradInfo as "Annual" training.*

## **5. Discussion-based training**

The Discussion based training requirement will be fulfilled for all Neuroscience Ph.D. students through a workshop activity at each of our biannual “Cross Campus Research Day” (CCRD) research retreats. The Neuroscience Program has Ph.D. students training in East Lansing and in Grand Rapids in the Department of Translational Science and Molecular Medicine. In order to strengthen program cohesiveness, the program holds a research focused retreat for students and faculty. The goal is to strengthen research interactions between faculty and students across campuses. All Neuroscience Ph.D. students are required to attend CCRD. We will develop specific 1.5 hour workshops built around an RCR topic to be incorporated into the program of each CCRD event. Examples of possible discussion topics include, “Experimental design and statistical analysis planning before the experiment”, “Verification of biological reagents” and “Reporting scientific misconduct.” The workshops will ensure uniformity of discussion based training across all students and this will also facilitate reliable tracking of student participation in discussion based training. *Completion of this requirement will be recorded by the Neuroscience Program in GradInfo as “Annual” training.*