**Department of Fisheries and Wildlife Responsible Conduct of Research Plan for Graduate Students Beginning Programs January 1, 2017 or Later**

**Context**

Training in the Responsible Conduct of Research is essential in the preparation of 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. This plan was developed to meet the new University minimum training requirements as outlined in email from Provost Youatt and Vice-President Hsu on August 29, 2016. Those requirements were predicated on the principles that a basic understanding of issues is necessary through didactic training and a periodic reinforcement of the principles through discussion. We note that students who are supported by NSF, NIH, or USDA grants, or other grants with RCR requirements may be required to complete additional specific training; they must meet the timeline and content requirements of training for any grant supporting them as well as those given below.

Students who will be engaged in research involving human subjects or animal use must complete the Michigan State University training modules for those subjects before engaging in such research. These modules may, in addition, be completed as part of the training requirements below.

Completion of this plan is required of graduate students starting in their program spring of 2017. Graduate students who started in fall 2016 can optionally elect to follow this plan rather than the previous plan.

**Requirements that apply to all graduate professional, master’s and doctoral students**

**1)**  **All new graduate and graduate professional students will complete 4 specific CITI online modules by the end of the first academic year of enrollment in their program**:

* Introduction to the Responsible Conduct of Research
* Authorship
* Plagiarism
* Research Misconduct

**2) Discussion-Based Training**

All graduate and graduate professional students must complete a minimum of 6 hours of discussion-based training prior to receiving their degrees. These hours can be completed at any point in the graduate program, including by the end of the second academic year, and if done during years 3 or later can also be used to meet the annual refresher training requirement for PhD students for the year they are taken. This discussion-based training can include for-credit courses, discussion groups, and seminars and can include use of online materials as long as there is also substantial discussion of that material. The content of this material should be relevant to the responsible conduct of research in the sub-discipline the student is working in and can include a wide range of topics including Data Acquisition, Management, Sharing and Ownership; Publication Practices and Responsible Authorship; Peer Review; Conflict of Interest; Collaboration; Mentoring; Research Misconduct; Plagiarism; Animal Use, Research with Human Subjects; Research Reproducibility. While the discussion-based training can expand on training covered in CITI modules satisfying the year 1 and year 2 requirements for those modules, time spent completing modules used to satisfy those requirements cannot be counted toward this requirement. The specific discussion-based training used to satisfy this requirement must be approved by the student's advisor. Examples of appropriate discussion-based training that has previously been offered within the Department of Fisheries and Wildlife, which would generally qualify include sessions run by lab groups (including at least one PI) on RCR topics with discussion an integral aspect of the session, and workshop's held by the Department Associate Chair on selected RCR topics.

**Requirements that apply just to Master’s plan A and doctoral students**

**In addition to 1 and 2 above, master’s plan A and doctoral students will complete:**

**3)** Before the end of the second academic year after first enrollment in their program, 3 additional MSU online training modules, to be selected from the following list.

* CITI Collaborative Research
* CITI Conflicts of Interest
* CITI Data Management
* CITI Financial Responsibility
* CITI Mentoring
* CITI Peer Review
* IACUC Tutorial for Animal Care Training (in http://Train.ORA.msu.edu)
* Human Research Protection/ IRB Certification (in http://Train.ORA.msu.edu)
* Rigor and Reproducibility Course (in production)

**In addition to 1, 2 and 3 above, doctoral students will complete:**

**4) Annual Refresher Training starting in year 3**

Starting in year 3, all doctoral students must complete 3 hours of annual refresher training; this can include discussion-based training and online courses beyond the 7 required in basic training. The content of this material should be relevant to the responsible conduct of research in the sub-discipline the student is working in and can include a wide range of topics including Data Acquisition, Management, Sharing and Ownership; Publication Practices and Responsible Authorship; Peer Review; Conflict of Interest; Collaboration; Mentoring; Research Misconduct; Plagiarism; Animal Use, Research with Human Subjects; Research Reproducibility. While discussion-based training can expand on training covered in modules satisfying the year 1 and year 2 requirements for those modules, time spent completing modules used to satisfy those requirements cannot be counted toward this requirement. The specific training used to satisfy this requirement must be approved by the student's advisor.

**Record keeping and reporting of training**

Graduate students will be required to enter information on the RCR requirements in a timely fashion following procedures available on the Department of Fisheries and Wildlife's web site. All requirements that are completed must be recorded following Department procedures, including the online modules. Although the official university record of completion of these modules is kept through the SABA system, recording these data by the student will allow for better tracking by the department and provide information on time required to complete the modules or spent discussing them, which is necessary to validate some granting agency requirements.

The Department will annually, following the spring semester, record completion of "initial" (# 2 from above) and "annual" training for PhD students (# 4 from above) through GradPlan. The Department will certify this training based on records kept through the above mentioned Departmental Procedures. Students will be asked to fill out a form by the end of the spring semester each year summarizing the completion of "initial", "annual" "year 1" (first four required modules) and "year 2" (three modules chosen from list). This will help ensure that student completion of requirements is properly recorded and tracked.